COMMERCIAL FERTILIZER

CONSOLIDATED WITH THE FERTILIZER GREEN BOOK

MORE STEAKS PER STEER

TO INCREASE AMERICA'S SUPPLY of wholesome, nutritious, protein-rich beef, the fertilizer industry is helping farmers to grow bigger yields of better quality livestock feed at lower cost.

For example, high-Nitrogen, complete fertilizers and Nitrogen top-dressings, used on pastures, produce a luxuriant growth of grazing crops rich in proteins, minerals, vitamins and other nutrients. Steers harvest these extra yields of good green feed and use them to produce extra pounds of high quality beef.

These facts are featured in the most recent in a series of Barrett advertisements in The Saturday Evening Post and Fortune directing attention to the service of the fertilizer industry.

THE BARRETT DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 RECTOR STREET, NEW YORK 6, N. Y. • RICHMOND 19, VA. • SOUTH POINT, OHIO
HOPEWELL, VA. • ATLANTA 3, GA. • COLUMBIA 1, S. C. • SAN FRANCISCO 3, CAL.

Barrett NITROGEN*

THE ELEMENT THAT MAKES PLANTS GROW!

*Reg. U. S. Pat. Off.

YOU'LL KNOW THE Bagpaker® BY THE COMPANIES IT KEEPS

These companies are *repeat* buyers of Bagpakers. Because they were pleased with the performance of the first Bagpakers they bought, every one of these firms bought one or more additional Bagpakers!

WHAT IS THE SECRET? First, superior design and construction provide efficient, economical and trouble-free operation. Second, BAGPAK SERVICE assures *continued operating efficiency.*

That's why Bagpakers pay for themselves in a hurry—and then keep right on paying bonuses in the form of better, more economical operation.

If you are considering the purchase of a new bag closing machine, then be sure to investigate the Bagpakers. Write today—ask for booklet No. 270C.

International Paper Company

BAGPAK DIVISION

220 East 42nd St., New York 17

BRANCH OFFICES · Atlanta · Baltimore · Baxter Springs, Kansas · Boston · Chicago · Cleveland · Denver · Los Angeles · New Orleans · Philadelphia · Pittsburgh · St. Louis · San Francisco.

IN CANADA · The Continental Paper Products, Ltd., Montreal, Ottawa.

LION provides one-stop nitrogen service to Southern fertilizer manufacturers

Lion Anhydrous Ammonia — Manufactured in Lion's modern plant to an 82.25% nitrogen content under accurate chemical control, the uniformity and high quality of this basic product are assured.

Lion Aqua Ammonia — This product is available to manufacturers for use in the formulation of mixed fertilizers or for sale as direct application material. Normally about 30% ammonia, its content can be controlled by order to suit your needs.

Lion Nitrogen Fertilizer Solutions — Made specifically for the manufacturing of mixed fertilizers, these products supply both ammonia nitrogen and nitrate nitrogen in the ratios desired. They are easily handled and available in three types designed for varying weather conditions, and for formula requirements in the production of fertilizers that cure rapidly, store well and drill evenly.

Lion Ammonium Nitrate Fertilizer — The improved spherical white pellets in this product contain a guaranteed minimum of 33.5% nitrogen. They flow freely, resist caking and store much better. Lion Ammonium Nitrate Fertilizer is shipped in 100-pound, 6-ply bags with two moisture-proof asphalt layers.

Lion Sulphate of Ammonia — This new, superior-type sulphate is guaranteed to contain a minimum of 21% nitrogen. Through special conditioning of the larger crystals, moisture and free acid content is greatly reduced. These factors, together with the special coating applied, make for greater resistance to caking in shipment or in storage. This product flows freely. It is shipped in bulk and in 100-pound, 6-ply bags laminated with asphalt.

"Serving Southern States"

Technical advice and assistance to fertilizer manufacturers in solving their manufacturing problems is available for the asking . . . just write.

LION OIL COMPANY

Chemical Division • El Dorado, Arkansas

POTASH
TRONA
SALTS

Trona
Muriate of Potash

This vitally important ingredient of mixed fertilizer provides the soil nutrient necessary to resist plant diseases and to enhance the productivity of crops. To obtain the best results, specify "Trona" Muriate of Potash . . . made by the pioneer producers in America.

Three Elephant
Agricultural Pentahydrate
Borax

Contains a minimum of 44% B_2O_3 or approximately 121% equivalent Borax. More economical in this concentrated form when used as an addition to fertilizer or for direct application to the soil, to correct a deficiency of Boron. Consult your local County Agent or State Experimental Station.

AMERICAN POTASH & CHEMICAL CORPORATION

122 EAST 42nd STREET • • • NEW YORK 17, N. Y.

231 S. LA SALLE STREET
CHICAGO 4, ILLINOIS

214 WALTON BUILDING
ATLANTA 3, GEORGIA

3030 WEST SIXTH STREET
LOS ANGELES 54, CALIF.

EXACT WEIGHT Sacking Scales – Your best Cost Control Measure . . .

If you sack Commercial Fertilizer you are faced with three factors . . . underweight, overweight and EXACT WEIGHT. The problem is to eliminate the first two . . . retain the latter at the lowest cost in equipmen and manpower possible. Trimming costs are accomplished only by better methods, faster operation and sound proven equipment. When you package eliminate the overweight package—save product . . . correct the underweight bag — stop short weights. The cost control measure is EXACT WEIGHT Sacking Scales to fit your operation. A uniform bag is what it is supposed to be, no more, no less. If you sack free flowing chemicals you must weigh accurately and in volume tonnage operations it must be fast as well as accurate from filling machine to final checking. The most efficient and least expensive method is fill, weight and check in one operation. That is what EXACT WEIGHT Sacking scales do and have been doing for many years in the fertilizer industry. Write for details pertaining to your particular layout.

SALES and SERVICE in all Principal Cities from Coast to Coast and Canada.

EXACT WEIGHT SCALES

Industrial Precision

THE EXACT WEIGHT SCALE COMPANY

906 W. Fifth Avenue • Columbus 8, Ohio
2920 Bloor St, W Toronto 18, Canada

COMMERCIAL FERTILIZER

ESTABLISHED 1910

October, 1951

Vol. 83, No. 4

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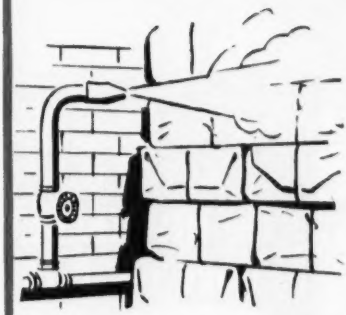
NO. 1
OF A SERIES
ON HOW TO

Stretch a MULTIWALL Paper Bag

Kraft paper supplies are short. So it is important for you to get the best use from your multiwalls. Here is one way to stretch them...

Keep Storage Rooms Humid:

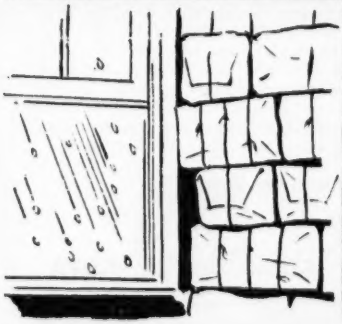


1. Let steam escape in bag storage room to keep air and bags humid. Keep a humidity indicator in the storage room and check it frequently. Always leave aisles or spaces between stacks of bags to allow circulation.

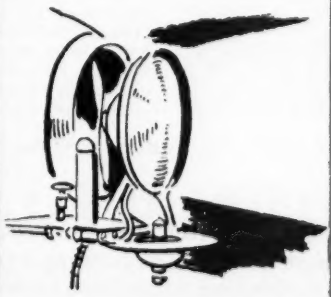
2. Store bags on dunnage, away from floor, and keep floor wet so moisture can be absorbed into air. A relative humidity of about 50% at warm temperature is best.

3. Drill small "needle" holes in horizontal water pipes. Hang cloths over holes. Air absorbs moisture from wet cloths.

4. Hang wet cloths over edge of water barrels. Cloth absorbs water and air absorbs moisture from cloth. Keep barrels well filled.



5. Open windows on damp or rainy day. Damp outside air will circulate in the bag storage room. Multiwalls are strongest when moisture content of the paper is about 6 or 7%.



6. Use commercial humidifying apparatus. Many types of commercial humidifiers are available with capacities to suit individual requirements.

Want the Whole Story?

Ask your Bemis Man for free, illustrated copy of Bemis Multiwall Packaging Guide. It deals with Storage, Filling and Closing, Handling, Palletizing and other important subjects.

• • •

Maybe Cotton Bags are Your Answer . . . if you can't get all of the multiwalls you need. Cotton bags are available . . . and Bemis is the leading cotton bag source.

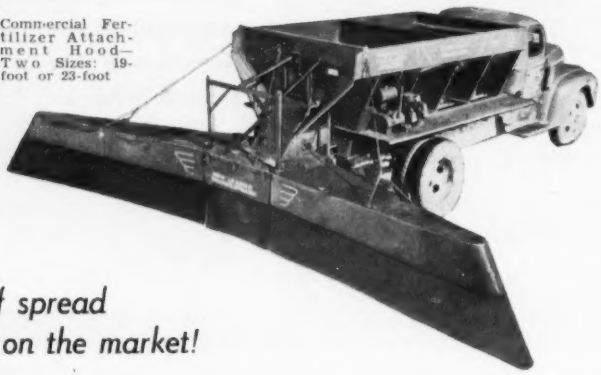
Bemis

BEMIS BRO BAG COMPANY

St. Louis 2, Missouri

Here's the answer to your Spreading Problems!

AGAIN! "The NEW LEADER" leads the field



Commercial Fertilizer Attachment Hood—Two Sizes: 19-foot or 23-foot

with its new "Motor-Driven Spreader" offering greater accuracy of spread with the most positive feed on the market!

SPECIAL ADVANTAGES— Uniformity of spread is not dependent on truck speed. Motor is mounted on catwalk and drives only the twin distributor discs at a constant speed, assuring full width of spread at all times together with uniform distribution.

Conveyor is separately driven from truck drive shaft by a series of V-belts to deliver the correct amount per acre—regardless of truck speed or regardless of whether the truck is driven in low, super-low or any other gear.

Conveyor speed is, therefore, positively synchronized with speed of the rear wheels of truck and at each revolution of the rear wheels, the conveyor moves a given distance regardless of the truck's speed. Amount of material delivered by conveyor does not vary with hilly or soft field conditions.

Spreader Body Lengths (inside measure) are 9', 11', 13' and 15'. Other body lengths on special order.

Note: When Spreading Attachment is folded up for road-traveling position, width is approximately 7'-5".

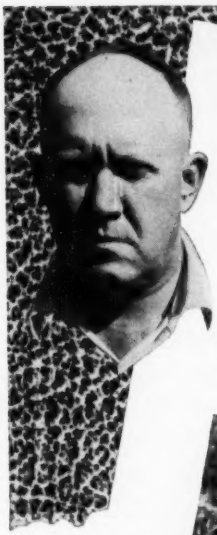
"The NEW LEADER" Self-Unloading Bulk Transport

The 20-ton capacity transport above is shown with elevator in place and ready to load a NEW LEADER Spreader truck. These units are proving very profitable; in bad weather they eliminate demurrage on railroad cars; fertilizer gets to the job quickly and spreader trucks can be kept working in the field. The transport, being a self-unloading unit, leaves the tractor truck free to return to pick up another transport load. These units have four individual compartments of 5 tons each. Each compartment may be unloaded independently of the others. Compartments and rear endgate are removable so that bagged and packaged goods may be hauled instead of bulk loads. Capacity 5 tons to 25 tons, lengths from 11 ft. to 40 ft. Written warranty with all NEW LEADER equipment. Write today for specifications, prices, etc. Fast delivery service sells fertilizer!

FREE! Write for "The Story of a Custom Fertilizer Spreading Service".

HIGHWAY EQUIPMENT COMPANY, INC. CEDAR RAPIDS, IOWA

MANUFACTURERS OF THE WORLD'S MOST COMPLETE LINE OF SPREADERS



Pastures treated with 8-8-8 carried 30% more cattle for Beryl Wayt, Michigantown, Ind.

"I applied 8-8-8 at the rate of 400 pounds per acre on 25 acres of Big English bluegrass and ladino clover," says Mr. Wayt. "I also applied 400 pounds of 0-12-12 on 10 acres of the same mixture. The pasture treated with 8-8-8 carried 30 per cent more cattle per acre than the pasture treated with 0-12-12."

400 pounds of 0-12-12 fertilizer per acre.

400 pounds of 8-8-8 complete fertilizer per acre.

USS AMMONIUM SULPHATE UNITED STATES STEEL

Bigger yields for farmers ...better business for you

● Experiences like that of Mr. Wayt are convincing farmers that high-analysis mixed fertilizers point the way to bigger yields and bigger profits every time.

You can obtain your full share of this business by including in your line high-grade complete fertilizers in which U·S·S Ammonium Sulphate provides a major part of the nitrogen. Fertilizers containing U·S·S Ammonium Sulphate stand up well in storage . . . perform well in drills and other distributing equipment . . . pay off in increased yields.

You'll probably find supplies of Ammonium Sulphate somewhat shorter this year so plan your needs well in advance. United States Steel Company, 525 William Penn Place, Pittsburgh 30, Pa.

USS

U·S·S AMMONIUM SULPHATE

UNITED STATES STEEL

JUST AROUND THE CORNER

By Vernon Mount

A SIDEWISE MOVEMENT, the economists call it, when things are just rolling along as they have been. And that is the way things seem to be in just about every possible way, as I write this letter.

KOREAN WAR...NO PROGRESS. Tough fighting, and rough on the boys who are doing it. But really no progress.

KOREAN PEACE...NO PROGRESS. Hair-splitting by the Communist negotiators and suspended negotiations leave that situation exactly where it was.

DEFENSE PREPARATIONS...much less progress than we should have had by this time. There is always a bigger schedule "just around the corner" which turns out to be like the famed prosperity which was around the same corner a generation back.

RESUMPTION OF BUSINESS...has delayed and delayed. Stocks have run low. People want merchandise. But both merchants and their customers are sitting on their hands, waiting for lower prices that are probably not to come in our time.

DEFEAT OF INFLATION...is a losing battle. Not that any galloping inflation is on us--but the spiral keeps moving steadily upward.

Yours faithfully,

Vernon Mount

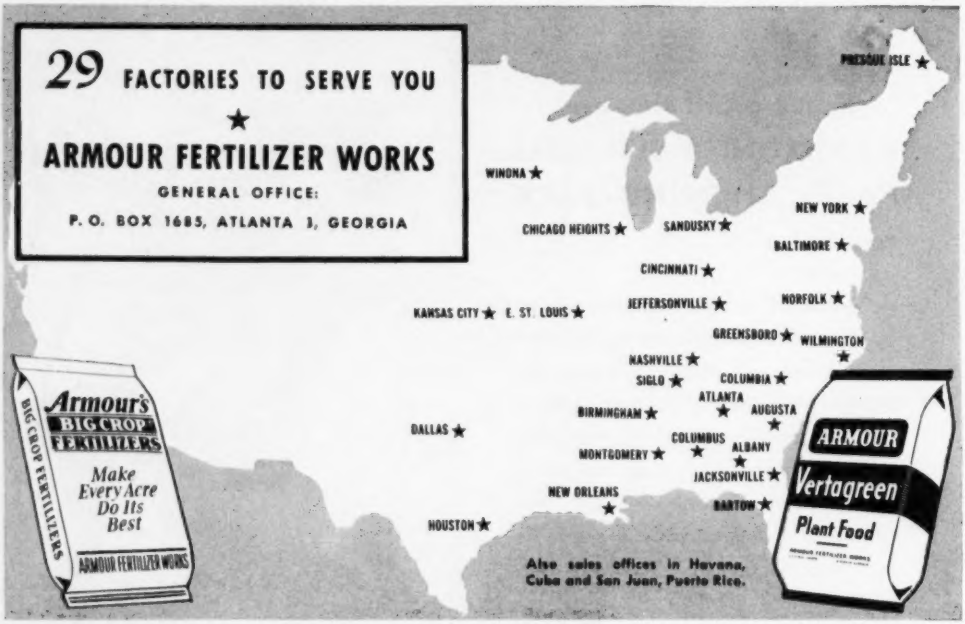
Don't scold the boy a RAYMOND MULTI-WALL PAPER SHIPPING SACK can take it!

We wouldn't recommend rough treatment to fertilizer shipping sacks. However, Raymond Shipping Sacks are made to withstand all the hardships of handling, packing, shipping, and transportation. They are also sift-proof, dust-proof, and water-resistant. Your Raymond Shipping Sack is made to do the job all the way from packer to user.

There is a Raymond Multi-Wall Paper Shipping Sack CUSTOM BUILT for your individual packing and shipping requirements. They are made with valve or open mouth, pasted or sewn—printed or plain. Select your own size, type, and strength.

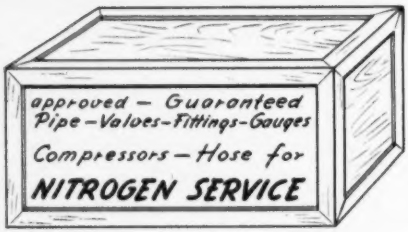
THE RAYMOND BAG COMPANY
MIDDLETOWN, OHIO

RAYMOND *MULTI-WALL* PAPER SHIPPING SACKS



Approved Piping Equipment for NITROGEN SOLUTIONS

Handling Nitrogen Solution, even under pressure, is an easy job for pipe, valves, fittings and other accessories that are designed for this corrosive job. Aluminum piping with "quick opening" valves designed to carry Nitrogen Solution, insure a trouble-free piping system that will carry this solution from the tank-car to your storage tank, and then to your mixer. Air hose, pipe and an adequate compressor to give the pressure you need for quick, efficient operation must be free from any copper or copper alloy connections, brazing, or welding.



A piping layout using these materials, is approved by all the major producers of this chemical. These materials are available from one source. Ask your Solution Representative, and write for free bulletin showing a detailed piping layout and complete "bill of materials".

J. M. TULL METAL & SUPPLY CO., Inc.

285 Marietta Street N.W.

Atlanta 3, Georgia

MICA makes the DIFFERENCE

Triple PROTECTED STEEL

Get Plasteel

ROOFING and SIDING

Protection **NOW!**

1. **STEEL BASE**— for strength and durability
2. **RUST INHIBITOR COAT**— protects steel and anchors plastics firmly to steel
3. **ASPHALT-PLASTICS COAT**— seals out weather and corrosive influences
4. **MICA FINISH COAT**— makes the difference! Adds beauty, insulation and permanence.

When you need roofing and siding, you usually need them in a hurry. While Plasteel is geared for speedy service, right now with the hard pull obviously ahead, it's wise to anticipate. Let Plasteel estimate your needs. Remember, with Plasteel—*and only Plasteel*—you also get *mica protection!* And there's the big difference! Mica is immune to deterioration. Mica adds lifetime protection to your buildings.

Plasteel also gives you speedy erection. It's easy to handle, and requires no skill. Economical too, needs no paint, no repairs.

Let us **QUOTE** you from **STOCK**

PLASTEEL ROOFING SIDING PRODUCTS

PLASTEEL
PRODUCTS CO.
Washington, Pa.

Mail Coupon Today

PLASTEEL PRODUCTS CO., Washington, Pa.

☐ Engineer's Handbook ☐ Sample of Plasteel
☐ Send Estimate. Specifications attached.

Company Name.....

Attention of..... *Title*.....

Street Address..... *Box No.*.....

City..... *State*.....

You can supply magnesium in the most effective way in mixed fertilizers with

Sul-Po-Mag®
Water-Soluble
Double Sulfate of Potash-Magnesia

cotton leaves
showing magnesium deficiency

Cotton leaves with magnesium deficiency show purplish-red color with green veins. Second in a series of six advertisements showing magnesium deficiency symptoms in tobacco, cotton, grapefruit, corn, potatoes and oats.

More and more farmers in many areas are recognizing the importance of magnesium to the healthy growth of their crops. Many are learning by actual experience that their soils must have an adequate supply of this essential plant nutrient in order to produce the large yields of high quality crops that bring more profit per acre at harvest time.

The most practical and economical way to supply your farm customers with magnesium . . . in the soluble form they want . . . is to use *Sul-Po-Mag* as a regular ingredient in the fertilizer grades you supply for crops grown on magnesium-deficient soils.

Sul-Po-Mag, produced exclusively by *International* is a properly balanced combination of potash and magnesium, both in water-soluble form and immediately available to the growing crops. It is being produced in larger quantities than ever before to meet the increasing demands of farmers for *Sul-Po-Mag* in complete fertilizers and for direct application.

SUL-PO-MAG (Water-Soluble Double Sulfate of Potash-Magnesia)
MURIATE OF POTASH **SULFATE OF POTASH**

THIS IS WHY GROWING PLANTS MUST HAVE MAGNESIUM

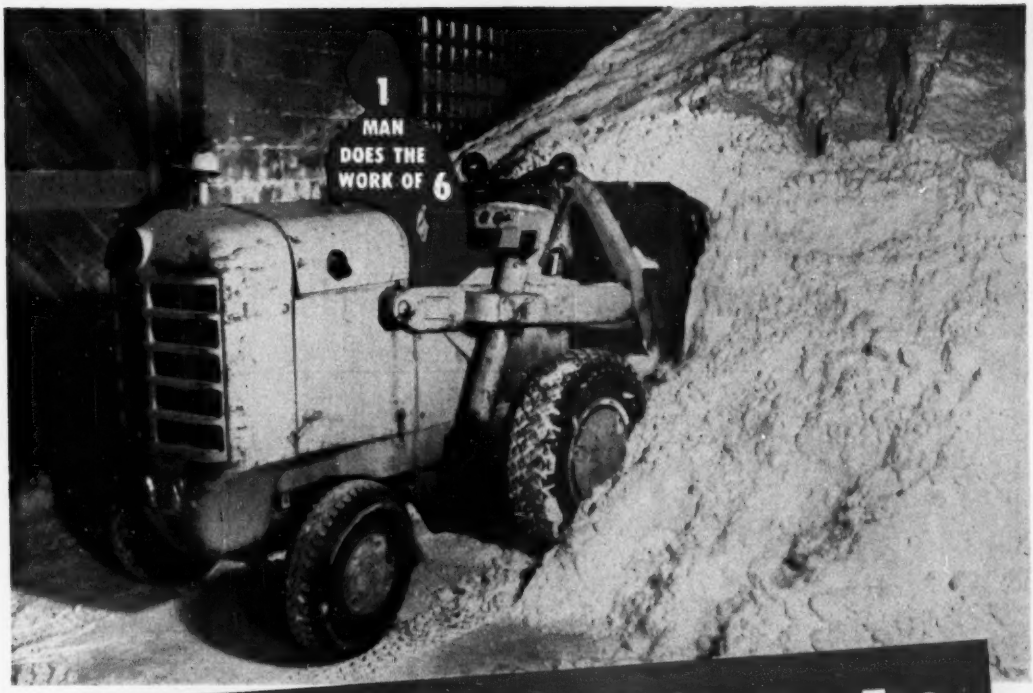
- It is required in the life process which gives plants their green color and keeps them growing.
- Promotes earlier maturity on soils low in magnesium.
- Enables crops to make better use of other plant foods.
- Carries phosphorus to the growing and fruiting parts of the plant.
- Necessary for the development of seed.
- Promotes the formation of proteins in growing crops.
- Stimulates growth of soil bacteria and fixation of nitrogen by legumes.
- Increases the plant's resistance to diseases.

WRITE TODAY FOR FREE COPY

OF THIS NEW SUL-PO-MAG BOOK

POTASH DIVISION International Minerals & Chemical Corporation

INTERNATIONAL MINERALS & CHEMICAL CORPORATION
General Offices: 20 North Wacker Drive, Chicago 6



PAYLOADERS Can Help You Too

THE chemical and fertilizer industries are constantly adding to their fleets of Hough PAYLOADERS because these unit-built tractor-shovels are a sure, proven way to lick rising costs, solve manpower shortages and increase output.

A PAYLOADER more than pays its way every day — actually pays for itself within a few months doing the many jobs listed here and doing them faster and cheaper . . . releasing manpower for more productive work.

The 12 cubic foot Model HA shown is the smallest of the PAYLOADER line that includes graduated sizes up to 1½ cubic yard bucket capacity. Every PAYLOADER is a complete, Hough-built tractor-shovel specifically designed with multiple reverse speeds and other features that insure fast, low-cost bulk material handling. They are backed by 30 years of material-handling equipment manufacture and are sold and serviced by a world-wide Distributor organization. The Frank G. Hough Co., 702 Sunnyside Ave., Libertyville, Ill.

Literature on any size PAYLOADER will gladly be sent without obligation.

On These Jobs

- Unload box cars
- Dig and carry fertilizers, chemicals, all loose materials
- Feed conveyors, hoppers, baggers, elevators
- Unload trucks
- Load box cars
- Carry bagged materials
- Clean up aisles, gangways
- Maintain private roadways
- Handle coal, coke, ashes
- Stockpile coal and materials
- Remove snow
- Lift-pull-push

SAY "HUFF"

PAYLOADER®

THE FRANK G. HOUGH CO. • Since 1920

Sulfuric acid for the free world

Approximately 40% of the free world's contact sulfuric acid is produced by Monsanto-designed plants, using Monsanto Vanadium Catalyst. There are more than 250 Monsanto-designed units, using all known raw materials and serving 25 countries.

Monsanto's standard designs for sulfuric acid plants offer the fertilizer industry these advantages:

1. CAPACITY to meet your needs . . . ranging from five to 500 tons of acid (100% H_2SO_4 basis) daily, with no equipment in parallel.

2. FLEXIBILITY in operation from 30% of capacity to more than rated capacity without "blanking off" or other operations that consume time and labor.

3. EFFICIENCY and ECONOMY. Monsanto-designed plants deliver top efficiency with low operating and maintenance costs. They produce by-product steam that gives further savings.

If you are interested in increasing your sulfuric acid production or in taking the initial steps to produce your own supply, you can have the benefit of Monsanto's more than 30 years' experience in the design and operation of sulfuric acid plants.

At your request . . . and without cost or obligation to you or your company . . . a Monsanto engineer will bring you full details. Write, wire or 'phone MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 1700 South Second Street, St. Louis 4, Missouri.

MONSANTO VANADIUM CATALYST

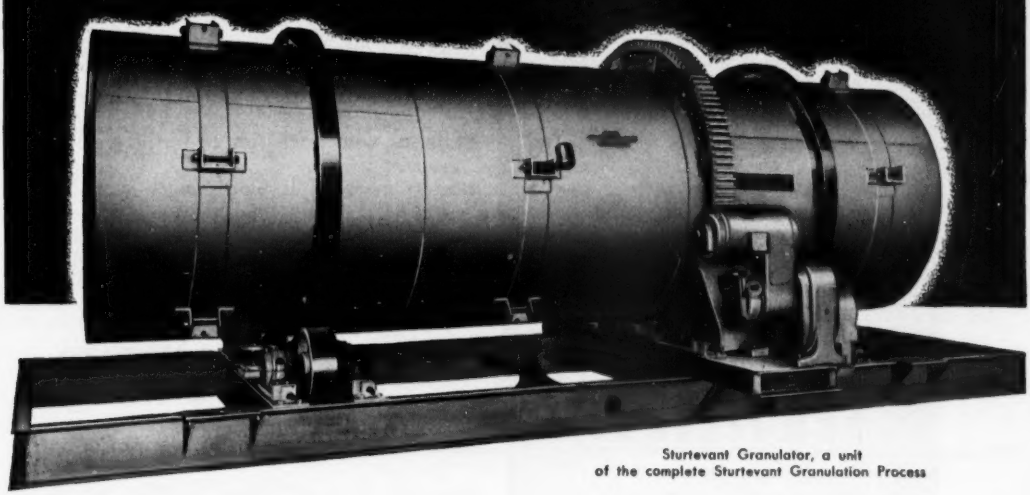
Monsanto Vanadium Catalyst, produced solely for use in the manufacture of sulfuric acid by the contact method, is highly efficient, rugged, long-lasting. It is used in Monsanto-designed plants in these countries: United States, Canada, Mexico, Cuba, Trinidad, Curacao, N. W. I., Argentina, Brazil, Chile, Peru, United Kingdom, Holland, France, Spain, Italy, Turkey, Egypt, Palestine, Iraq, Iran, India, Sumatra, Borneo, Australia, Japan.

MONSANTO
CHEMICALS – PLASTICS

SERVING INDUSTRY... WHICH SERVES MANKIND

A New Solution to Fertilizer Preparation . . .

with the New Sturtevant Granulation Process



Sturtevant Granulator, a unit
of the complete Sturtevant Granulation Process

★ ***Granular fertilizer can be stored over longer periods of time***

★ ***Holds chemical properties without deterioration***

It's here . . . the new Sturtevant Granulation Process for manufacturing granular or pelletized fertilizer. This outstanding method prepares fertilizer granules of uniform size. Its unique design and rugged construction assure long operating life with little if any maintenance.

It will pay you to investigate this new method of fertilizer preparation and Sturtevant Equipment.

Advantages of granular fertilizer include . . . Granular fertilizer can be stored over long periods without caking, a typical fault of ordinary fertilizer. It means that this type of fertilizer can be bought at any time and used when necessary. Being in hard granular form, it holds its chemical properties without deterioration. In addition, evidence shows that granular fertilizer increases the fertility of the land because plant foods do not wash down below the roots as quickly. It reduces waste . . . saves on labor time of distribution . . . is especially effective for use when airplanes are used for distributing fertilizer.

STURTEVANT MILL COMPANY
111 CLAYTON STREET, BOSTON 24, MASSACHUSETTS

Designers and Manufacturers of:
CRUSHERS • GRINDERS • SEPARATORS • CONVEYORS
MECHANICAL DENS and EXCAVATORS • ELEVATORS • MIXERS

Clip coupon below for complete information on this new Sturtevant Process of fertilizer preparation.

Mail this Coupon Today

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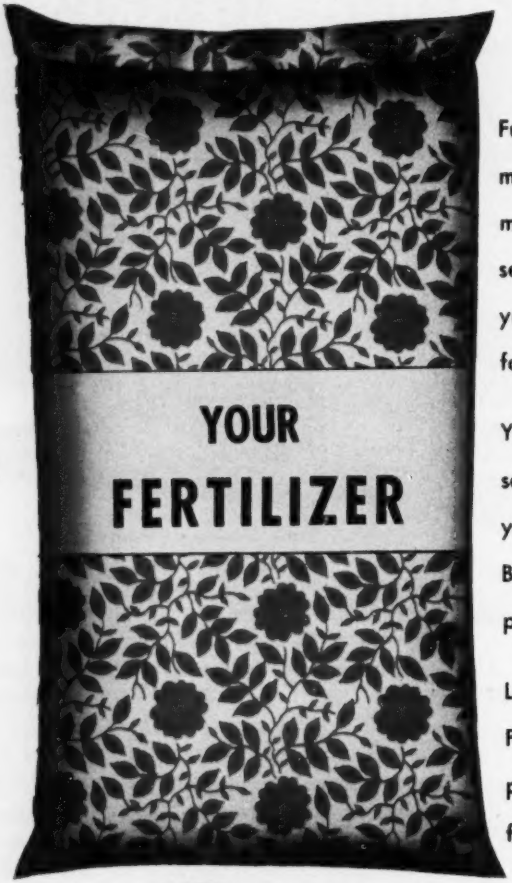

Fulprint Cotton Bags give your customer more than 20 yards of cotton print sewing material with each ton of fertilizer. This sewing material is worth much more to your customer than he pays for it in the form of bags.

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NFA Report On Outlook For Fertilizers

A. Sulfur and Sulfuric Acid

1. Producers of sulfuric acid report receiving 80 to 90 percent of last year's sulfur while purchasers of sulfuric acid report receiving only 50 to 80 percent of last year's receipts. NPA advises that they will take steps within the next two or three weeks to equalize the availability of sulfuric acid to all purchasers.

2. Sulfur stocks at the mine July 1951 were 306,000 tons less than at the same date in 1950. Sulfur mined the first seven months of 1951 was 110,301 tons less than in the first seven months of 1950.

3. Sulfur production from sour gas and other sources is increasing but difficulty still exists in obtaining certificates of necessity and the necessary materials for construction. NPA advises that they will give first priority on steel and other critical building materials for construction of facilities to increase sulfur production.

4. There is little chance of reducing sulfur exports much below 1,000,000 tons this year.

5. The new sulfur discovered by Freeport can not be in production within less than 18 to 24 months.

The above picture shows that the outlook for sulfur and sulfuric acid to our industry is very poor. About the most which we can hope for at present is to receive 90 percent of last year's supply.

B. Nitrogen

1. Official estimates are 1,350,000 tons N for agriculture in 1951-52, about an 8 percent increase over last year's production. Solid forms will be about the same as last year, approximately 800,000 tons of N. Liquid forms as anhydrous ammonia and solutions will be slightly increased to about 550,000 tons. These anticipated figures for agriculture are based upon the assumption that our country will not be in all-out war and that military demands will not be greater.

2. Of the total liquid nitrogen 125,000 tons will be used in direct application (nitrojection and nitrogation). This leaves 425,000 tons of liquid N to be used in ammoniation for mixed fertilizers. It would be difficult to absorb this amount even if last year's tonnage of superphosphate were available. With a reduction in superphosphate supply, the problem of using liquid forms becomes proportionately more difficult.

3. In addition to the above supplies, it seems likely that Morgantown will resume production of N but probably not in time to produce more than 60,000 tons N for use in the 1951-52 season.

4. New nitrogen production facilities have been approved for an increase of between 400 to 500,000 tons. None of this can be available for the coming season and most

(Continued on page 51)

It Seems to Me

by BRUCE MORAN

You and we both, together with millions of farmers, are about to be pushed out of business by Harvard University, if Drew Pearson is to be credited. In a recent column he told of the discovery of the secret of sunlight, and how Dr. James Conant had announced that plant life could be grown in test-tubes from one-celled algae.

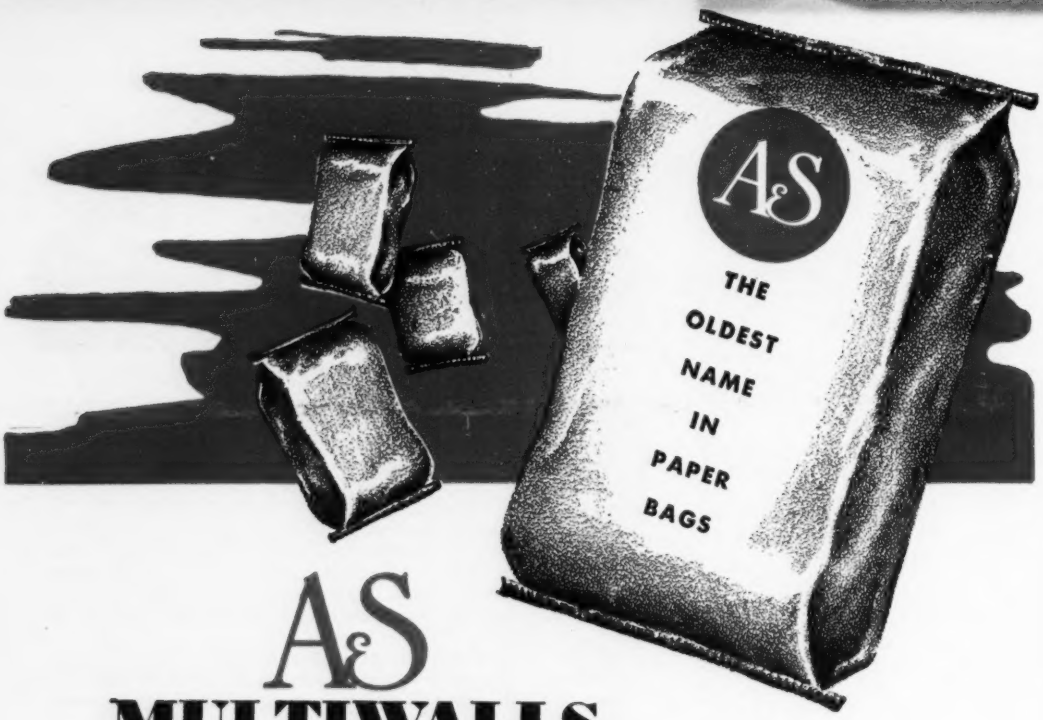
This, it was inferred, would lead to food factories, would solve the problem of survival in crowded areas such as Japan, and areas of little sunlight, such as England. It would make conquest needless, because "lebensraum" would be taken care of. And the millions that starve in India would starve no longer.

This is a pretty wonderful thing, and those results would compensate a lot of us for being pushed out of business. And I hope Drew Pearson is right about what Harvard is about to announce.

But in the meantime, it seems to me, we should all stick to our job of seeing that enough plant food is supplied to the good old soil of the world, so that the folks get fed as regularly as may be until this great revolution becomes a practical, operating fact.

INDUSTRY CALENDAR

Date	Organization	Hotel	City
October 11	National Safety Congress	Stevens	Chicago
Nov. 1-2	N. Y. Fertilizer Conf.	Col of Ag.	Ithaca
Nov. 1-3	CFA	California	Fresno
Nov. 12-14	NFA	Biltmore	Atlanta



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Fertilizer use AND CROP YIELDS

Four reports of major import to our industry and to agriculture—which is the same thing—have been published by the National Soil and Fertilizer Research Committee. This was organized in 1947 by a memo of understanding between the States in each Land Grant College Region, the Office of Experiment Stations, the Soil Conservation Service, and the Bureau of Plant Industry, USDA.

In 1951 a Fertilizer Work Group was appointed, and is the team responsible for these reports. It consists of W. E. Colewell, North Carolina AES; J. P. Conrad, California AES; K. C. Berger, Wisconsin AES; Mack Drake, Massachusetts AES; D. B. Ibach, and R. Q. Parks, USDA, chairman. J. B. Peterson is chairman of the National Committee.

These reports represent a type and scope of summary that has not been attempted previously in this country. Hundreds of agronomists contributed to it, headed up in each State by a representative chosen by the Director of that State's Experiment Station. And each of these was aided by staff members from his own institution.

The result is a series of reports: Southern Region; North Central Region; Northeastern Region; Western Region—and a national report, not yet issued. Each of these covers separately the States in its region, —and the sum total of the four reports covers the entire 48 States and the Territories. For each region and for each State the response to fertilizers of varying analysis are tabulated for each major crop.

The following, abstracted from releases concerning these reports will supply a clear idea of what has been found, and will—we believe—encourage fertilizer manufacturers to send for the report concerned with the region or regions in which they operate.

SOUTHEASTERN REGION

An enormous potential in the South for increasing crop yields through fertilization is indicated by the survey.

The corn crop offers the most spectacular opportunity for increased yields through higher rates of fertilization. According to the estimates, the present average yield of 26 bushels an acre represents only a third of the potential production. A combination of heavier fertilization, the use of adapted hybrids, close spacing, and other good management practices would triple yields. This would have meant, for example, more than a billion additional bushels from the approximately 24 million acres planted in 1949 and would have required an estimated 720 thousand tons of nitrogen. Total U. S. consumption of nitrogen in fertilizers in 1949 was a little more than a million tons.

One immediate value of the survey is to indicate the best use of phosphoric acid, now in limited supply because of the sulfur shortage. In the opinion of the crops and soils scientists making the study, moderate reductions can be made in superphosphate on crops and soils that have received heavy applications in the past—potatoes, vegetables, fruits, and other specialty crops. Yields will not be seriously affected. The survey indicates large areas where additional phosphate would increase feed and forage yields.

In current practices heaviest fertilization is applied to the tobacco, vegetable, fruit, and nut crops. For tobacco, planted on almost a million and a half acres in the South, the rates are 37 pounds of nitrogen. 89 pounds of phosphoric acid, and 64 pounds of potash an acre. The crops and soils specialists estimate tobacco growers are getting about 78 percent of the potential yields.

Vegetables, grown on 1 million, 700 thousand acres, are fertilized at rates of 43 pounds of nitrogen, 72 pounds of phosphoric acid and 50 pounds of potash an acre. Fruit and nut crops—on 1 million 900 thousand acres—get an average of 42 pounds of nitrogen, 43 pounds of phosphoric acid and 46 pounds of potash per acre.

Wheat, currently fertilized in the South at rates of two pounds of nitrogen, four of phosphoric acid, and two of potash per acre, yields an average of 14 bushels. Applications of 40 pounds of each of the plant nutrients per acre would up wheat yields another eight bushels per acre on the average. The same application to cotton would bring present yields of 640 pounds an acre up about 10 percent on the average.

The report reveals wide differences in yield potentials. These reflect the great range of soils—from the sandy coastal plains to the heavy clays of the Southwest—and in climate—from the humid East Coast to the Great Plains, where lack of moisture limits crop production.

NORTH CENTRAL REGION

Higher rates of fertilization on present plantings in the North Central States would produce crop yields equal to those from a vastly expanded acreage.

Forty pounds of nitrogen per acre—now applied only to tobacco —would give spectacular returns in field crops if used with adequate supplies of other fertilizer nutrients. It would produce an additional 600 million bushels of corn, 200 million bushels of wheat—equivalent to

present plantings of 14 million acres in each crop—and 400 million bushels of oats—equivalent to 11 million acres. General use of 40 pounds of phosphoric acid an acre would boost soybean yields by 42 million bushels, the equivalent of almost two million acres at current production rates.

By doubling the current average application of phosphoric acid (eight pounds an acre) North Central growers could increase yields of corn by 120 million bushels and of wheat by 30 million bushels. This would be the equivalent of three million acres of additional corn land and more than two million additional acres of wheat. Doubling the current average application of phosphoric acid (13 pounds an acre) on crops grown for hay would boost yields in the region by almost 3½ million tons, the equivalent of present production on more than one million acres.

But increased fertilization of these three crops would require nearly 600 thousand tons of phosphoric acid. That is the bottleneck. Total U. S. consumption of the plant nutrient on all crops in 1949-50 was not quite two million tons. This coming year's supply will be curtailed by a shortage of sulfur.

The estimates underscore the need for greater supplies of nitrogen and phosphorus. Joint Federal-State experiments show that high fertilization is a key to the use of other technical gains—improved varieties of crop plants, better disease control, new soil management and planting practices. By producing higher yields per acre, this combined technology frees more acreage for pasture and cover crops. The data indicate that these soil building crops will profit from more fertilizer. Tripling present average applications of phosphoric acid (four pounds per acre) would increase yields by six percent.

NORTHEASTERN REGION

Increased fertilization in the Northeastern States offers a new frontier equivalent to several million acres.

Regionwide, grass, hay, and permanent pastures offer a promising source of increased yields. The estimates indicate that tripling the present average application of five pounds of phosphoric oxide per acre would give Northeastern growers 10 percent higher yields. This would be the equivalent to yields from more than an additional million acres under present practices. The estimate is conservative, the scientists say. In pasture renovation tests, in which higher rates of fertilizer were combined with the use of improved grasses and legumes, yields have been increased from four to six-fold.

Tripling the present average application of phosphoric oxide on mixed legume-grass hay crops (13 pounds per acre) would give a 13 percent increase in yields—the equivalent of almost 1½ million acres of additional land. However, the higher rates would require an additional 143,000 tons of superphosphate, now in limited supply because of a shortage of sulfur.

The survey points out that in an emergency some reductions can be made in superphosphate use with only moderate yield loss, if the reductions are made on soils and crops that have received heavy applications over a period of years. Potatoes, other vegetables, and tobacco are examples.

In 1949, average fertilizer rates in the Northeast for vegetables (planted on about one million acres) were 58 pounds of nitrogen, 105 pounds of phosphoric oxide, and 83 pounds of potash per acre; for potatoes (on more than a half million acres) 82 pounds of nitrogen, 157 pounds of phosphoric oxide, and 196 pounds of potash; and on tobacco (119 thousand acres) 77 pounds of nitrogen, 79 pounds of phosphoric oxide, and 130 pounds of potash.

The survey shows that higher rates of nitrogen—40 pounds per acre—would boost present yields of small grains by about a third. The 1949 averages were 23 bushels an acre for wheat (on two million acres); 30 bushels for oats (also on two million acres) and 34 for barley (on more than 300 thousand acres). The same high rate of nitrogen on grass, hay, and pastures would increase yields by 65 percent and on mixed hay would boost returns 38 percent.

Northeastern growers are now using more phosphorus on corn, wheat, and oat plantings than is ordinarily applied in the South and North Central States. The survey shows the average rate on corn in the Northeast is 34 pounds per acre in comparison with 13 pounds in the South, and four pounds in the North Central Region. The average rate on wheat in the Northeastern region is 42 pounds, compared with eight in the Midwest and four in the South. Oats in the Northeast average 30 pounds of superphosphate per acre. Those in the North Central States get seven pounds, those in the South nine pounds. Average yields of the three crops are 42 bushels of corn, 23 bushels of wheat, and 30 bushels of oats in the Northeast; 44 bushels of corn, 14 of wheat, and 35 of oats in the North Central States; and 26 bushels of corn, 14 of wheat, and 25 of oats in the South.

WESTERN REGION

Western farmers are getting less than half of the potential yields on present plantings of wheat, hay, and corn.

Increased fertilization with phosphoric oxide and nitrogen would boost hay yields nearly six million tons—equivalent to three million acres under present practices; wheat yields 48 million bushels or 2,600,000 acres; and corn yields 10 bushels an acre or a total of nearly 10 million additional bushels.

In the West highest average phosphate is on fruits and nuts (44 pounds an acre); sugarbeets (42), flaxseed (40), and potatoes (34). The survey indicates large acres where additional phosphate would increase feed and forage yields.

Heaviest average applications of nitrogen are now made on fruits, nuts, and vegetables (56 pounds an acre); cotton (50); sugarbeets and flaxseed (43); potatoes (37); hops (33); rice (31) and seed and specialty crops (27). The average application on 14½ million acres of wheat is

(Continued on page 51)

In the Field of

ALLIED FARM CHEMICALS

NAC CONVENTION

With the news that pesticide production topped most goals fixed by USDA, and established a new high record for the industry, the National Agricultural Chemicals Association got off to a good start at its meeting, Spring Lake, New Jersey, September 5-7.

A feature of the first day was, of course, the address of President Ernest Hart, who said the challenge of the war to the industry was to produce more with less, and that the industry had made good its place of last year that no farmer would be forced to forego chemical protection of his crops and livestock for lack of pesticides. The industry has more than doubled its plants in the past ten years.

Speakers that day included a number of government men, representing NPA, OPS and USDA, and the report of Lea S. Hitchner, Executive Secretary.

Thursday was a meeting for members only. At the banquet that night J. Albert Woods presented the talk which appears in full in this issue.

Friday was devoted to forecasting the future, featuring Dr. H. L. Hallert, USDA; Dr. H. E. Longnecker, Dean of the U of Pittsburgh graduate school; Dr. Firman E. Bear of Rutgers; Gus M. Oehm of the Pineapple Research Institute, Hawaii; and Jack Vernon, vice-president Niagara Chemical division, Food Machinery and Chemical Corp.

Your Business - and Mine

By J. Albert Woods
President
Commercial Solvents Corporation

Those of us so engaged, take justifiable pride in the achievements of the chemical industry. Invesment bankers call it a "growth industry" and no one has yet challenged its right to bear that title.

For thirty years my association with various parts of this industry has been a thrilling and satisfying experience. Perhaps my viewpoint is prejudiced, but I know of no other business where enthusiasm, devotion and excitement all play such roles in the daily lives of those who are a part of it.

From the turn of the century until 1914 the industry just about kept pace with our general economy. We took our first real spurt between 1914 and 1929. It is of more than passing significance that, following the great depression, the chemicals as a group had recovered all their losses by 1935, whereas manufacturing production, generally, took another two years until 1937 to equal the pre-depression level.

An address Before the National Agricultural Chemicals Association 18th Annual Meeting. The Essex & Sussex, Spring Lake, N. J.

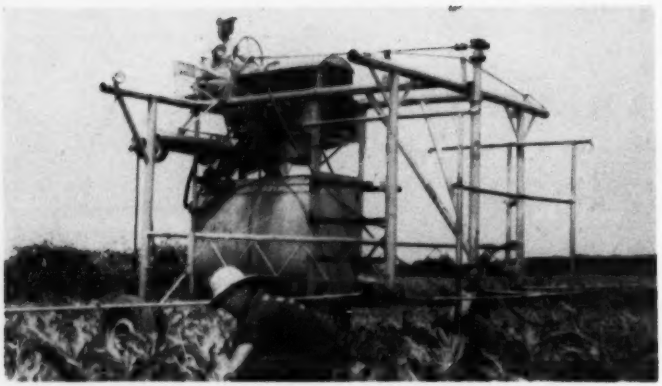
J. Albert Woods

From 1939 to 1943, manufacturing production rose 136 per cent; chemical output increased 243 per cent. Financial World Magazine is my authority for saying that in 1950, the output of industrial chemicals was 13 per cent above the wartime peak while manufacturing output was still 19 per cent below it. While it is true that great expansion has taken place during wars, it is a libel to say that chemical producers are "capitalist warmongers" because it is a provable fact that, with the possible exception of military explosives, the industry's products are just as essential in peace as in war.

There is a constant effort to produce new products, to find new uses for old products—to develop new processes, new raw material sources, better quality, lower prices—all of which contribute to greater markets and wider uses.

Dwight Moody, Chemical Editor of the New York Journal of Commerce, pointed out in a very recent article that the chemicals industry is now committed to a further $4 billion expansion plan this year which, topping steel's expansion plans by $800 million, is the greatest of its type ever seen in this country. It compares with roughly $5 billion invested by the industry in new plants and facilities in the five years following the war — a period which saw its total assests shoot up 60 per cent.

While it takes teamwork on the part of all in every great enterprise and industry, and while sales and production engineers and pur-



The Fuller Seed Company, Lincoln, Illinois, applies anhydrous ammonia with this modified detasseling machine, which is also used for corn borer and weed control applications. Don Auwarter is on the ground while Darrell Lesson is riding.

chasing departments have made notable contributions to our progress—it is my opinion that the keystone in the arch of the chemical industry is Research.

It is research that has made possible the rapid progress that has been made in the field of pesticides.

Never before in the history of agricultural technology have pesticides played such an important role as they have in the last five years. The phenomenal development of revolutionary new pesticides has accounted for the rapid advances associated with the industry.

Growth will continue because ample supplies of food, forage and fiber cannot be produced without them. Secretary of Agriculture, Brannan, recently emphasized this point by saying . . . "Adequate machinery, fertilizers, and pesticides—**the farmer's tools of production**—must be kept available."

It might be well, therefore, to highlight, even to this educated audience, a few of the valuable and significant contributions being made by your industry — and mine — to the economic improvement and well being of the world.

First, Pesticides and global health

The development of DDT and other new insecticides for controlling disease-carrying insects is recognized as one of the most important advances in medical history. The control of malaria, typhus, encephalitis, dengue fever, yellow fever, filariasis, and other diseases has improved the health of man and increased his life expectancy throughout the world.

Few people realize that malaria, the most important disease of man in the world, can be effectively and economically controlled merely by spraying insecticides within homes. According to the Expert Commiittee on Malaria, World Health Organization, ". . . territories whose total population reaches about 350 million are numbered among those where malaria is being mastered; and in a large part of these regions, the disease has already ceased to be a public health problem" . . . "there are about 50 million inhabitants of different parts of the world, particularly in rural areas, who have been shielded against the scourage of malaria . . ." through the use of insecticides. Almost complete elimination of malaria from the United States was hastened by the spraying of 800,000 homes last year by the U.S. Public Health Service and the State Health Departments.

One of the greatest public health accomplishments yet achieved with insecticides was the outstanding control of major epidemics of louseborne typhus during World War II. Authorities agree that the use of DDT stopped the typhus epidemic in Naples, Italy and subsequent outbreaks elsewhere in the world—saving thousands of lives.

Today, in Korea, as well as in Japan, the use of pesticides in protecting our troops from insect annoyance and disease is a routine measure for increasing combat effectiveness.

Second, Pesticides and timber

Lumber is by far the major construction material. The depletion of our forest reserves, a vital factor in the prevention of floods and soil erosion, used to be more than a threat. However, today, millions of acres of valuable forests are saved annually from destruction by insect pests through aerial application of insecticides. The development of highly effective and cheap protectants has for the first time provided a tool with which to reduce tremendous losses from injurious forest insects in inaccessible areas. Heretofore, losses due to insect epidemics were accepted because no methods were known for directly combating forest pests.

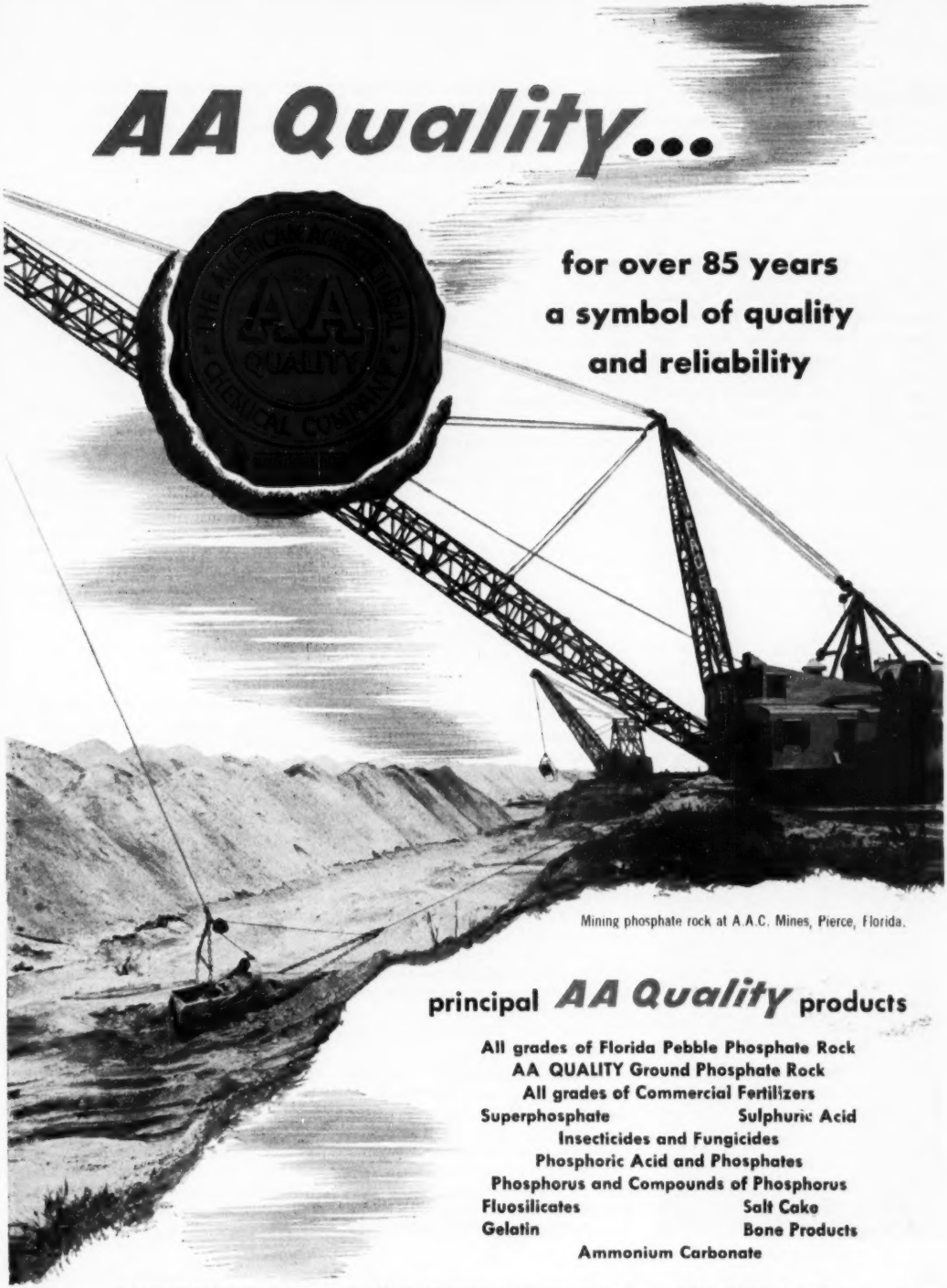
In addition to protecting vital timber stands, millions of board feet of stored pulp wood, green logs, and lumber are rendered immune to insect attack by the use of insecticides. Protection does not halt there. Chemical preservatives are applied to structural timber to protect it from deterioration from termites and decay, saving countless sums in renovation and rehabilitation.

Third, Pesticides and clothing

The value of using new pesticides for cotton insect control has been clearly demonstrated in combating the boll weevil. The importance of using them is illustrated by data obtained from the U.S.D.A.; in two community-wide experiments conducted in central Texas, fields which were sprayed or dusted produced a yield of 415 pounds per acre compared with 178 pounds from the untreated fields. The net profit was about $54. per acre. A similar large-scale test carried out in 1950 gave an average gain of $74.84 per acre. It is obvious what this type of control would have meant if applied

(Continued on page 42)

AA Quality...



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ARKANSAS

Arkansas Plant Food Company, Little Rock, control has passed into the hands of the **Arkansas Farm Bureau Federation.** Built two years ago with money subscribed by Farm Bureau members and others, the plant made a net profit of $237,000 last year on an investment listed in local newspapers as $418,000.

The **Arkansas Farmers Association,** which services 53 local co-op ventures, contracted to handle the entire output. The contract stipulated that patronage dividends be paid to B Preferred Stock holders and to Farm Bureau members who bought its product. $2 per ton was retained as sales expense by the Association, and this brought on controversy which threatened to split the two strong organizations.

The compromise settlement gave the Farm Bureau 8 of the 12 Board seats, and the Bureau surrendered its sole claim to that portion of the patronage dividends paid to non-stockholders. These dividends this year amounted to $2.62 per ton.

The new lineup on the Plant Food Board follows:

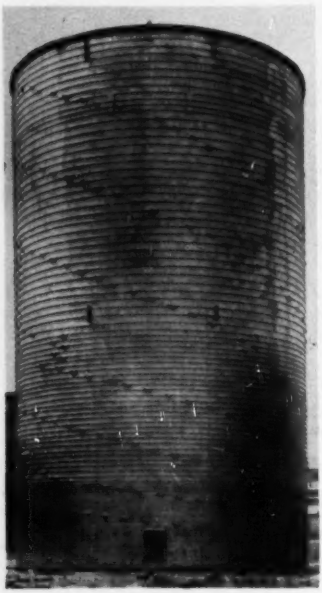
Re-elected—**Joe C. Hardin, Harry Goforth** of Fayetteville, **Walter D. May, Jr.,** of Marion and **Richard Barnett** of Altheimer, members of the Farm Bureau Board; **Elmer Miller** of Little Rock, **Raymond Frey** of Paragould, **Ralph Hudson** of Harrison, and **Joe Reed** of Springdale, members of the Farmers Association Board.

New members—**R. E. Short** of Brinkley, **Nolan Crawford** of Arkadelphia, **Fred P. Blanks** of Parkdale and **Harold Ohlendorf** of Osceola, all members of the Farm Bureau Board.

* * *

Lion Oil, El Dorado, has filed with the SEC to sell 350,000 shares of additional common stock of no par value, to add to working capital to replace funds expended for capital additions and to provide for future additions.

The Marietta Concrete Corporation, Marietta, Ohio designed and erected this storage silo at New Albany, Indiana, for The Tennessee Corporation. It is made with Air-Cell concrete staves, and provides storage for 1500 tons of phosphate rock. The Marietta Concrete Corporation has offices in Baltimore, Maryland and Charlotte, North Carolina.



CALIFORNIA

Metropolitan Fertilizer Co., Los Angeles, has been awarded a ten year contract for sale of fertilizer from the Hyperion sewage treatment plant of that city, a $7,700,000 contract. **Kenneth S. Kritser** is president of Metropolitan.

COLORADO

C. D. Smith Co., Grand Junction, have installed a 24,000 gallon storage tank for anhydrous ammonia. Their trade name is Gro-Ado. **C. A. Dewey** is superintendent of the agricultural division.

FLORIDA

American Cyanamid's Lakeland phosphate workings are about to have a face-lifting. **Arthur Crago,** Cyanamid manager there hopes to prove that the ugly scars left by mining can be replaced by meadow that will be self-sustaining or even profitable as grazing area for cattle. Panola grass, an excellent cattle feed, is being planted. Other phosphate operators are expected to do likewise when the experimental tract has demonstrated what can be done.

* * *

Armour Fertilizer Works' plant at Bartow will have double its present capacity when development under way for some time has been completed, according to announcement by **The Rust Engineering Company,** Pittsburgh and Birmingham, Alabama. It was designed by them in 1949, has a capacity of 75,000 annual tons. The project now under way includes triple superphosphate processing equipment.

* * *

International Minerals & Chemical's Florida Phosphate division moved its offices from Mulberry to Bartow in late August. On Labor Day, more than 3,000 employees and their families came to a barbecue given by the company, and inspected the new $350,000 office building and $500,000 warehouse and service center.

Informal ceremonies were participated in by **R. B. Fuller,** manager of the corporation's Florida phosphate division; **F. A. Koechlein** of Chicago, general manager of international phosphate operations, and **Marion Wiggs,** president of Local 35, International Chemical Workers Union of A. F. of L., who praised the corporation for its outstanding labor relations. He termed the corporation an outstanding example of proper management relations. On behalf of the union, he congratulated the corporation on the progress it had made.

* * *

Wilson and Toomer, Jacksonville, had a fire which caused only $400 of damage, and which resulted from an explosion said to have been caused by a piece of iron in sulphur being carried through machinery.

GEORGIA

Cotton States Fertilizer Co., Macon, whose mixing plant was destroyed by fire August 10, estimate the damage at $200,000 in plant and machinery. **Calder B. Clay** is president.

Around the Map

ILLINOIS

Darling and Co., East St. Louis, suffered loss estimated at $100,000 to $300,000 when fire damaged a plant section in which four thousand tons of phosphate fertilizer was stored. Three big overhead cranes and 125,000 paper bags were in the burned section. A shop foreman said sparks from an acetylene torch set fire to the bags, and the heat exploded the ammonia pipes. Firemen protected three ammonia storage tanks adjacent to the blaze.

IOWA

International Minerals & Chemical Corporation officials were guests of the Mason City Chamber of Commerce at a luncheon held Sept. 13 to mark the completion of the new plant for the manufacture of sulfuric acid at International's chemical fertilizer plant there.

Attending the luncheon from International's headquarters in Chicago were **Louis Ware,** president; **James P. Margeson, Jr.,** executive vice president; **Maurice H. Lockwood,** vice president in charge of the corporation's Plant Food Division; and **Thomas M. Ware,** chief engineer. Also present was **R. L. Williams,** president of the **Chicago and North Western Railway,** which has three sidings at the International plant and originally owned the land on which the plant was built.

Following the luncheon, attended by more than 300 members of the Mason City Chamber of Commerce and civic officials, an inspection trip was made through the plant, which produces mixed fertilizer and superphosphate. It has been operated by the Plant Food Division of International since 1946.

LOUISIANA

Freeport Sulphur has uncovered a brimstone deposit which will add half a million tons to the world's annual production of sulphur by 1953. It is the first major deposit of the mineral discovered in two decades. The deposit is located at Garden Island Bay, 100 miles southeast of New Orleans, and is native sulphur, the purest form, contained in a typical salt dome formation on a tract of about a thousand acres. It was discovered by the **Texas Company,** in its oil explorations, and the rights were leased to Freeport.

Freeport Sulphur officials plan a ten to fifteen million dollar mining operation there, the Government willing.

MINNESOTA

University of Minnesota laboratories of the US Bureau of Mines are working to make practical the recovery of sulphur from iron sulfide deposits, and manganese from iron ore—both of which are plentiful in Minnesota.

MISSOURI

Merle Hamill and **Dale Gamet** of Canton have levelled their site and begun construction of a mixing plant at Memphis (Missouri, not Tennessee). Fertilizer will be mixed "to a prescription determined by soil tests" and deliveries are expected this Fall on phosphate, but fertilizer will not be mixed until early Spring. Mr. Hamill intends to construct another mixing plant at Edina when the Memphis plant is in operation.

NEW YORK

Freeport Sulphur Company, New York, has rented the entire 8th floor of the new Chrysler Building East on a long term lease, and will move executive offices there when the building is completed, which should be in November. **John Hay Whitney** is Chairman, **Langbourne M. Williams, Jr.,** is president. (See Louisiana).

* * *

City of New York park department has asked for $804,800 to manufacture "synthetic soil"—topsoil to cover 375 acres of park land. The soil would be made from treated sludge from the city's sewage-treatment plants.

NORTH CAROLINA

Lion Oil has run into a major obstacle, the need for a guaranteed supply of 15,000,000 cubic feet of natural gas daily, every day in the year, in its planning to erect at Charlotte a $30,000,000 anhydrous ammonia plant. DPA has given Lion Oil authority to write off in five years half of the proposed plant's cost. **The Charlotte Chamber of Commerce** is bending every effort to rectify this situation.

OHIO

American Agricultural Chemical Co. has bought a 50-acre tract near Lima, they have announced. They are producers of Agrico fertilizers and other chemicals.

OKLAHOMA

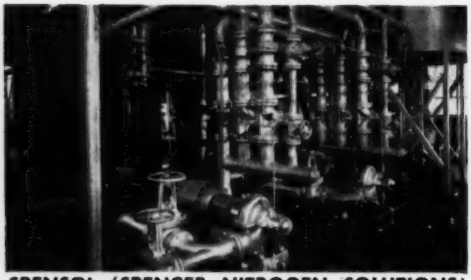
Consumers Cooperative, Muscogee, will build a $250,000 addition to its fertilizer plant, according to **Howard A. Cowden,** president and general manager of the Association. The structure, 160 by 80 feet should be finished in time for the Spring season, says **K. A. Schmitt,** man-

SINCE 1919 this modern plant near Sumter, South Carolina, has produced many tons of top quality fertilizer... adding hundreds of thousands of dollars to farm profits in the area.

LIKE SO MANY leading mixers, the Sumter Fertilizer Company, under the management of J. L. Nichols, depends on Spensol for nitrogen and Spencer Chemical Company for service.

Spensol Supplies the Nitrogen

...to Sumter Fertilizer Company, Inc.



SPENSOL (SPENCER NITROGEN SOLUTIONS) is made at two strategically located Spencer plants: Charlestown, Indiana, and Pittsburg, Kansas. An ever-increasing number of manufacturers have found that Spensol enables them to produce well-conditioned fertilizers at surprisingly low cost.

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Everything that grows must feed. This law, as every farmer knows, applies to young plants as well as to young pigs. That is why it is important to maintain the nourishing properties of a good soil and enrich those of a poor one. One of the surest ways of reaping well-nourished, abundant crops is through the wise use of the right types of fertilizers.

Many of the most effective of these fertilizers contain potash —often Sunshine State Potash, a product of New Mexico. For potash is not only a soil nutrient; it is a crop strengthener as well, giving greater resistance to disease and drought.

Reg. U. S. Pat. Off

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GRANULAR MURIATE OF POTASH 48/52% K_2O MIN.

MANURE SALTS 20% K_2O MIN.

UNITED STATES POTASH COMPANY, *Incorporated*, 30 Rockefeller Plaza, New York 20, N. Y.

ager. This will bring to $750,000 the total plant investment.

SOUTH CAROLINA

Home Guano Company, Mullins, are completely remodelling the old section of their plant. **Atlanta Utility Co.** are in charge of the program.

* * *

Logan-Robinson Fertilizer Co., Charleston, suffered a fire August 29 which knocked out of commission their two mixing plants, and destroyed a recently completed 50-foot plant addition. **W. Hampton Logan, Jr.,** company vice-president, said the loss was completely covered by insurance, the damaged portion of the plant will be rebuilt immediately, and the fire will not cause any interruption of company operations, nor any decrease in employment.

TEXAS

Phillips Petroleum has been granted a certificate of necessity and priority assistance in the construction of the plant, already under way, near Goldsmith, to extract sulphur from natural gas at the rate of 250,000 pounds per day.

* * *

Garwood Dehydrating Company, Garwood, has been granted a charter; capital stock $150,000; incorporators: **William N. Lehrer, Dorothy J. Lewis,** and **William K. Lehrer.**

* * *

Rice Belt Liquid Fertilizer Service, Inc. has been granted a charter; capital stock $20.000; incorporators: **F. B. Howard, Bob A. Reed** and **Bluebell Reed.**

VIRGINIA

Virginia-Carolina has announced a program of four scholarships annually for children of its employees. President **Joseph A. Howell** said the scholarships are valued at $750 each and the first four will be presented for the 1952 college year. Parents must have been in the V-C employ for at least three years, and cannot be senior officers.

* * *

Richmond Guano, were hosts to a delegation of teachers who went through the plant as part of a board program of teacher-business experiences. They were given white smocks bearing the Richmond Fertilizer brand name, and after a little hesitation found themselves fascinated by the operation. The teachers were chosen by lot, and were not necessarily concerned with teaching agricultural, chemical or other related subjects. The idea is to prepare the teachers to prepare their pupils for contact with the business world.

WISCONSIN

Midwestern Phosphate Corporation's general manager, **D. W. Aitken,** has written from Madison to the **USDA's Charley Mays,** Director of Agricultural Conservation Programs Branch, challenging specific recommendations. Mr. Aitken says it is not true that there will not be enough superphosphate to go around during the current crop year. It is true that there will be less phosphate fertilizer for the 1952 crop than there was for the 1951 crop. But "going around" is entirely a matter of how much superphosphate is contained within each ton of fertilizer consumed. It is a two page letter, and goes into a considerable analysis of the situation. But for the record, we want to put in Mr. Aitken's final sentence: "Superphosphate may indeed be a 'scarce material', but fertilizer will not be".

* * *

Milorganite made from Milwaukee's sewage sludge may top the two million dollar mark in this years sales, according to word from that city. The revenue pays 50% to 60% of the sewage plant operating costs.

AUSTRALIA

West Australia's Parliament is working toward research into alternatives to superphosphate during the shortage, and points to results ogtained by use of a fertilizer containing equal parts of lime and superphosphate.

AUSTRIA

Austrian Nitrogen Works, Vienna, produced 207,800 tons of ammonium nitrate of lime in the first half of this year, compared with 180,760 tons in the same period last year. Sales were made to about 30 countries.

FRANCE

Mines Domaniales de Potasse d' Alsace has the exclusive exploitation rights to the Alsation potash mines owned by **Societe Kali St. Therese.** It is believed that their steady improvement in equipment for the production of potash will reduce costs to the point where this industry can compete with the low prices of East Germany, and thus continue to export a major share of output.

RUSSIA

Russian scientists claim to have invented a plant growth accelerator so powerful a mere pinch will speed up plant development several times. Your editor believes it will turn out to be the essence of a lot of guano!

Listing Of NFA Districts Is Corrected

The release from NFA published in our August issue incorrectly listed the States included in the various NFA districts. The correct listing of the territory in each district, effective July 1, 1951, is given below:

District 1—The States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut

District 2—The States of New York, Pennsylvania and New Jersey.

District 3—The States of Ohio, Michigan, Indiana and Kentucky

District 4—The District of Columbia, and the States of Maryland, Delaware, West Virginia, Virginia and North Carolina

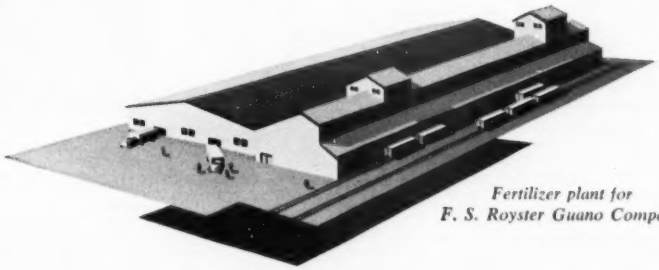
District 5—The State of South Carolina

District 6—The State of Georgia

District 7—The State of Florida

District 8—The States of Alabama,

(Continued on page 40)



Fertilizer plant for
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Personals

James E. Totman, president, released these personnel changes at **Summers Fertilizer Company** just too late to catch our September issue:

Ralph E. Fraser, vice-president and general manager of their Maine operations for the past fifteen years has been moved to the home office, and made administrative vice-president, with **Kenneth Lyons** as his assistant.

Fred L. Litty will take his place in Maine and Eastern Canada. Mr. Litty is vice-president-elect of Summers and vice-president of **Northern Chemical Industries.**

Frank H. Totman becomes vice-president in charge of Aroostock County sales and branch offices. He is a Summers director and president of the **A. E. Mooers Company,** Houlton, Maine.

James C. Totman becomes manager of the Bangor branch, with **Donal Thompson,** moved up from salesman to assistant manager. Mr. Totman is assistant treasurer of the company and former assistant manager at Bangor.

Owen Hannigan, Houlton plant manager, has been granted a six months leave of absence.

Howard Miller, assistant secretary, recalled to military service as Captain in the Field Artillery, has been granted a leave of absence for the period of this service.

William Rasmussen has been made assistant to **William Stolt,** manager of Summers Red River division.

Gordon Tollerud has joined them as agronomist.

* * *

Irving D. Dawes, vice-president and treasurer of **Virginia-Carolina** has been elected president of the Richmond chapter of Controllers Institute of America. **J. R. Arthur,** comptroller of **Tobacco By-Products and Chemical** is treasurer of the chapter.

* * *

Howard Joe Miller has been transferred to the Mt. Pleasant plant of **Hi-Yield Fertilizer Co. William T. Stanford** has been promoted to retail sales supervisor. **Dee Haggard** becomes store manager in Bonham.

* * *

F. S. Washburn, American Cyanamid Board member, and director of its agricultural chemicals division, has been made president of the Canadian subsidiary, **North American Cyanamid, Limited.** He succeeds **H. P. Eastman,** who retired August 31. **E. D. Powers,** vice-president and director of the present company, was elected vice-president.

* * *

George M. Hebbard, on leave as vice-president of operations and engineering for **Davison Chemical,** has been made Deputy Chief, Inorganic and Agricultural Chemicals Branch, Chemicals Division, **National Production Authority.**

R. M. Morehead, who has been appointed sales manager of the Arkansas Fertilizer division of Mathieson Chemical Corporation, with headquarters in the Donaghey Building, Little Rock.

Robert A. McDonald who is now head of the development department of the plant food division of International Minerals & Chemical Corp.

At the open house in honor of the American Editors Association, held by NFA September 10 at the Association offices, these distinguished visitors were photographed: H. L. Cosline, American Agriculturist; Milon Grinnell, The Michigan Farmer; John M. Collins, Weekly Kansas City Star; Ferdie Deering, Farmer Stockman; Jack Sampier, National Livestock Producer; Berry Akers, The Farmer; Ray Yarnell, Capper's Farmer.

When APFC held a luncheon for the American Editors Association, September 10, the president of the editor's association, Ferdie Deering, right, editor of Farmer-Stockman interviewed APFC president Paul T. Truitt, center, while AAEA secretary-treasurer, editor of Agricultural Leaders Digest, C. L. "Cap" Mast, looked on.

John H. Wallace, Jr. who has been made sales representative in the Pittsburgh area for Plasteel Products Corp., Washington, Pa.

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Dust-Arresting Equipment
Fume Scrubbing Systems
Hoppers and Spouts
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Milling and Screening Units
Multiple Hopper Batching Systems
Oil Fired Dryers
Plant Mechanization Systems
Pneumatically-Operated Gravity Batch Mixers
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William A. Gauntt, a Rutgers graduate in Agriculture has joined the agricultural division of **Commercial Solvents,** will make Binghamton, N. Y. headquarters and will handle their feed, fertilizer and insecticide products in the Northeastern states.

W. Cordes Snyder, Jr. has been elected president of the Blaw-Knox Company, moved up from vice-president of the Koppers Company. Former president **William P. Witherow** will continue as Board Chairman, with **Chester H. Lehman** continuing as vice-chairman and executive vice-president.

* * *

Donald Cole has been assigned to take over the duties of **G. H. Kinsey,** who is retiring from **H. J. Baker & Bro.,** New York.

* * *

Peter B. Bradley has become the fourth generation of his line to be an executive of **Bradley Pulverizer Company,** Allentown, Pennsylvania. Great-Grandfather W. L. was a pioneer fertilizer manufacturer. Grandfather Peter B. and Great-Uncle Robert S. were the founders of **American Agricultural Chemical Company.** Father W. L. is president of Bradley Pulverizer and of **Bonneville Ltd.,** potash concern, and a partner in **Bradley & Baker,** New York fertilizer brokers.

Peter B. has been made assistant managing director of Bradley Pulverizer, and brings to the post not only a rich family tradition in the fertilizer field, but considerable personal experience of his own.

With this appointment, two Peter B. Bradleys and two William L. Bradleys have been company executives.

* * *

Robert B. Arnold dean of the **Virginia-Carolina** research department has retired after 47 years with the company. He was made Director of Research in 1949. Dr. William P. Boyer has been named director of the research department after four years in the department.

James B. Moore, former manager of the V-C chemicals division sales department is now manager of the division. **John G. Asher,** has moved up from assistant to Mr. Moore's old spot. **Robert J. Keller** has become assistant.

Charles T. Harding has been made general manager of the manufacturing department, fertilizer division, **Andrew A. Farrell** has been made assistant manager of the V-C mining division. **Hugh M. Griffith** is now assistant superintendent of the Carteret, New Jersey, plant.

J. Earl Harper has become superintendent of the New Bern, North Carolina plant. **Thomas P. Rutledge** is assistant superintendent of the Cinicinnati, Ohio, plant. **Russell S. Wilson** is assistant Superintendent of the East St. Louis plant.

Paul Renfroe is now assistant manager of the Columbia, South Carolina, office. **Loy A. Everett** replaces him as assistant to manager of the Savannah, Georgia, sales office. **James R. Campbell** has been made assistant to manager of the Shreveport, Louisiana, office. **Haywood C. Colvin** is now assistant to manager of the Birmingham, Alabama, office.

Frank C. Richter, Jr. is assistant manager, manufacturing department, in charge of engineering.

* * *

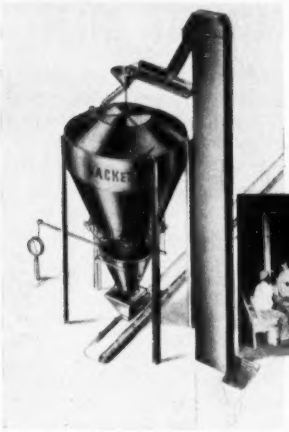
James H. McMillen has become Western district sales manager of the multiwall bag sales division of the **St. Regis Paper Company.** This area includes California, Washington, Oregon, Arizona, New Mexico and Nevada. His headquarters will be in the company's Los Angeles office at 530 West Sixth Street.

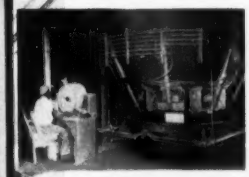
The appointment represents another step in the coordination of the various activities in the Western District of the Multiwall Bag Division of the company under the direction of **Robin G. Swain.**

* * *

Dr. Joseph M. Pensack is director of a new Nutritional Research Division established by the Research Department of Commercial Solvents Corporation in Terre Haute, Ind., it has been announced by Thomas S. Carswell, Vice President of Research and Development.

SACKETT FERTILIZER PROCESSING SYSTEMS PAY OFF





Control Panel

These fast fertilizer processing systems have reduced production costs in some plants as much as 65% . . . An estimated cost savings included with a Sackett survey of your production operations may even exceed this figure.

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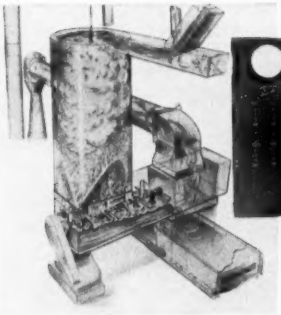
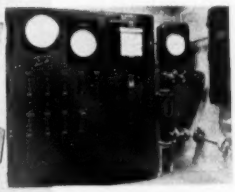
4. Its compact design permits installation in existing buildings with minimum alterations.

5. The installation of this system does not, in any way, disturb existing mixing facilities.

Built in four sizes, 25 tons to 100 tons per hour.





Central control panel shown above is nerve center of Super-Flo Process. Plant is operated from this point by one man.

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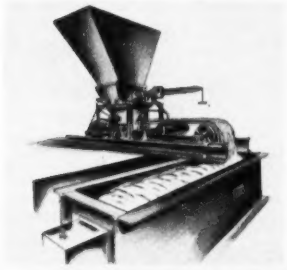
This new Sackett-conceived and developed process produces a superphosphate of premium quality in either powdered or granular form. Its complete mechanization and centralized panel control brings to the industry entirely new conceptions of high production speeds, low manufacturing costs and quality product control.

These Sackett patented processes are built in three sizes, 25 tons to 75 tons per hour.

Exclusive suspended acidulation produces highly converted superphosphate of excellent quality.



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Lierd E. Grant as manager of the Los Angeles branch has been announced by **Richard F. Straw**, vice president in charge of sales, **The Howe Scale Company**, Rutland, Vermont. Mr. Grant will also continue as manager of the San Francisco Branch where **William J. Tucey** has been appointed assistant.

O. B. Collins is manager of the Atlanta branch. He was formerly associated with the company's branch at Houston, Texas. He will supervise activities in Georgia, South Carolina, Florida, Alabama and the southeastern portion of Tennessee.

Jack H. Brewer is manager of the Minneapolis branch. He will supervise activities in Minnesota, northwestern Wisconsin, northwestern Iowa, North Dakota, South Dakota and western Montana.

The company's Chicago branch has moved to 1915 North Harlem Avenue, Chicago 35, Illinois. Curtis B. Hoffman is manager.

* * *

Swift & Co. officials recently visited Atlanta, Georgia for a two-day sales meeting which more than 100 field representatives from the company's plant food division attended.

* * *

C. T. Prindeville, Chicago, vice-president, who heads all plant food and agricultural chemical operations, directed the meetings.

* * *

Among other prominent officials participating were **A. F. Miller**, general manager of Swift's plant food division, considered as the "father" of complete plant feeding; **W. F. Price**, assistant general manager of northern and western divisions; **H. E. Balback**, Southern division sales manager.

* * *

E. H. Rappe, in charge of agricultural chemical sales throughout the United States, and the following division managers: **O. D. Culpepper, Paul Reynolds, A. B. Everett, J. S. Zapf, J. W. Whitaker, W. L. Gray, C. D. Smith and Austin Cook.**

A. L. Wiley, manager of the Atlanta plant food division for the company, was host.

INDUSTRY ADVISORY COMMITTEES BUILT OF PROMINENT MEN

The several committees representing the fertilizer and allied farm chemical industries in conjunction with the work of OPS are made up of men who are leaders in their fields, and well able to advise the OPS on moves calculated to be of greatest value to the handling of the commodities involved.

Following are lists released to Commercial Fertilizer from the Office of Price Stabilization:

MIXED FERTILIZERS

Ray L. King, President, Georgia Fertilizer Company, Valdosta, Georgia; J. E. Totman, President, Summers Fertilizer Company, Inc., Baltimore, Maryland; B. H. Jones, President, Sunland Industries, Inc., Fresno, California; C. D. Shallenberger, President, Shreveport Fertilizer Company, Shreveport Louisiana; John A. Miller, President, Price Chemical Company, Inc., Louisville, Kentucky.

Dewey K. Lange, Secretary, Lange Brothers, Inc., St. Louis, Missouri; W. T. Wright, Vice President, F. S. Royster Guano Company, Norfolk, Virginia; V. J. Leahy, General Sales Manager, The Baugh and Sons Company, Baltimore, Maryland; A. M. Eno, Manager, G. L. F. Soil Building Service, Ithaca, New York; S. L. Nevins, Vice President, Agricultural Chemical Sales, Mathieson Chemical Corporation, Little Rock, Arkansas; W. B. Hicks, President, Wilson and Toomer Fertilizer Company, Jacksonville, Florida; Fred S. Olmsted, Eastern States Farmers' Exchange, Inc., West Springfield, Massachusetts.

SUPERPHOSPHATE

J. W. Rutland, Gen. Mgr., Plant Food Division, International Minerals & Chemical Corporation, Chicago, Illinois; W. E. Shelburne, Armour Fertilizer Works, Atlanta, Georgia; C. M. Powell, President, American Agricultural Chemical Co., New York, New York; J. A. Howell, President, Virginia-Carolina Chemical Corp., Richmond, Virginia; W. T. Wright, Vice Pres., F. S. Royster Guano Co., Norfolk, Virginia.

F. R. Dulany, President, Southern States Phosphate & Fertilizer Company, Savannah, Georgia; Wm. Caspari, Jr., Gen. Sales Mgr., Phosphates Department, Davison Chemical Corp., Baltimore, Maryland; A. D. Strobhar, President, Southern Fertilizer & Chemical Co., Savannah, Georgia; S. L. Nevins, Vice Pres., Mathieson Chemical Corp., Baltimore, Maryland; Hans Stauffer, Vice Pres. & Gen. Mgr., Stauffer Chemical Company, San Francisco, California; F. W. Darner, Sales Manager, U. S. Phosphoric Products, Tennessee Corporation, Tampa, Florida.

Horace Albright, president, United States Potash Co., New York; W. L. Bradley, president, Bonneville, Ltd., New York; A. Norman Into, vice president, Potash Division, International Minerals & Chemical Corp., Chicago, Ill.; W. J. Murphy, vice president, American Potash & Chemical Corp., New York, N. Y.; George E. Petitt, vice president, Potash Company of America, General Sales Office, Washington, D. C.

GENERAL PESTICIDES

J. Hallam Boyd, Executive Vice President, Commercial Chemical Company, Memphis, Tennessee; B. P. Webster, Vice President, Chipman Chemical Company, Bound Brook, New Jersey; J. V. Vernon, Vice President, Niagara Chemical Division, Food Machinery Corp., Middleport, New York; H. J. Langhorst, Manager, Insecticide Department, American Cyanamid Company, New York, New York; W. W. Allen, Manager, Agricultural Chemical Sales, The Dow Chemical Company, Midland, Michigan; E. F. Stayner, Ass't Manager, Agricultural Products Department, Shell Chemical Corp., New York, New York.

John A. Rodda, Insecticide Divi-

sion, U. S. Industrial Chemicals, Inc., New York, New York; W. Mercer Rowe, Jr., Vice President, Flag Sulphur & Chemical Company, Tampa, Florida; Paul Mayfield, Ass't General Manager, Naval Stores Department, Hercules Powder Company, Inc.; Wilmington, Delaware; W. C. Bennett, President, Phelps-Dodge Refining Corp., New York, New York; George F. Leonard, Executive Vice Pres., Tobacco By-Products & Chemical Corp., Richmond, Virginia.

W. J. Haude, President, Pittsburgh Agricultural Chemical Co., Empire State Building, New York, New York; Carlos Kampmeier, Manager, Agricultural Sales, Rohm & Haas Company, Philadelphia, Pennsylvania; Mr. Joseph Regenstein, Jr., President, Velsicol Corp., Chicago, Illinois; John Stoddard, Sales Manager, John Powell & Company, Inc., New York, New York.

DDT and BHC MANUFACTURE

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Samuel Rotrosen, Secretary, Montrose Chemical Corporation of California, Newark, New Jersey; R. S. Roeller, Assistant General Sales Manager, Pennsylvania Salt Manufacturing Co., Philadelphia, Pennsylvania; J. V. Vernon, Vice President, Niagara Chemical Division, Food Machinery & Chemical Corporation Middleport, New York; Wm. J. F. Francis, Manager, Agricultural Chemicals Division, Pennsylvania Salt Manufacturing Company of Washington, Tacoma, Washington; Carols Kampmeier, Manager, Agriculture Department, Rohm & Haas Company, Philadelphia, Pennsylvania; W. F. Newton, Columbia Chemical Division, Pittsburgh Plate Glass Company, Pittsburgh, Pennsylvania.

REPROCESSORS AND FORMULATORS

Members of the Committee are:

J. K. Kirk, Agriculture Sales Mgr., General Chemical Division, Allied Chemical & Dye Corp., New York, New York; B. P. Webster, Vice Pres., Chipman Chemical Company, Inc., Bound Brook, New Jersey; E. H. Phillips, Dir. of Purchasing Department, G. L. F. Soil Building Service, Div. of Cooperative GLF Exchange, Incorporated, New York, New York; W. Mercer Rowe, Jr., Vice Pres., Flag Sulphur & Chemical Co., Tampa, Florida; James McConnon, Vice Pres., McConnon & Company, Winona, Minnesota; W. J.

These 10 Marietta Air-Cell tanks at North Little Rock, Arkansas, were custom built to provide dependable, year 'round safe storage at low handling costs.

Our engineers and erection specialists can design and erect a complete storage system to give you this same kind of permanent storage space, when and where you want it.

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Price $750 FOB Chattanooga, Tenn., complete with all controls, low water cutoff, safety valve, pressure gauge, steam hose, nozzle, etc., mounted on 6" casters. ASME Code construction. Specify voltage required, 220,440, or 550.

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301 James Building,
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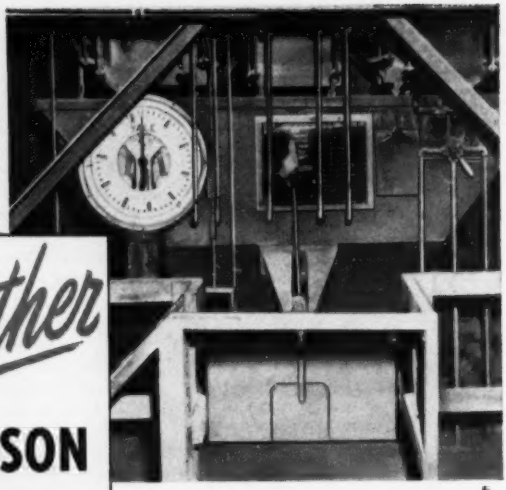
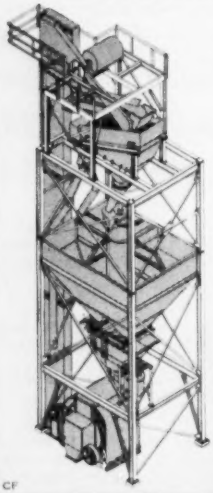
Johnson multiple material weigh-batcher, with 5,000-lb. dial head scale, accurately weighs up to 5 (or more) fine-grained materials. Top levers open fill valves from overhead 5 section bin. Lower lever discharges batch into the mixing unit.



Another

JOHNSON BLENDING PLANT

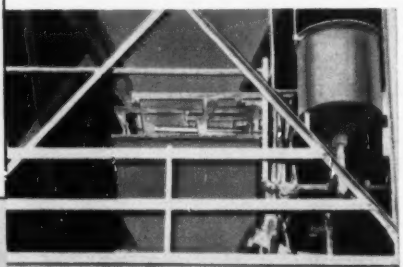
for midwestern fertilizer manufacturer

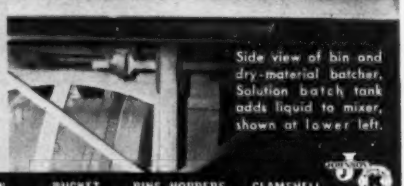


TO modernize one of its plants, a leading midwestern fertilizer manufacturer installed Johnson elevator, bin and batching equipment . . . gained a 25% increase in production, and, at the same time, substantially reduced manpower requirements. As a result, the fertilizer firm has equipped another one of its manufacturing plants with Johnson blending equipment, shown here.

Here's how this mechanized handling eliminates slow, costly manual methods: In one continuous cycle of operation, material travels up bucket elevator to clod breaker . . . through separating screen into collecting hopper. From hopper, pulverized fertilizer passes through pivoted distributor into 5-section, 65 cu. yd. bin . . . then, to multiple-material weigh-batcher, and into mixing unit for final blending operation.

To check savings possible in your plants, call your Johnson distributor, or write us.





Side view of bin and dry-material batcher. Solution batch tank adds liquid to mixer, shown at lower left.

CF

C. S. JOHNSON CO. CHAMPAIGN, ILLINOIS

Send us more information on Johnson fertilizer blending plants.

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NITROGEN MATERIALS

W. W. Cooper, Inorganic Chemical Sales, Dow Chemical Company, Midland, Michigan; H. J. Henry, Vice President, Commercial Solvents Corp., New York, New York; R. F. Hopkins, Vice President, San Jacinto Chemical Corp., Houston, Texas; G. W. Huldrum, Jr., Asst. Sales Mgr., Shell Chemical Company, San Francisco, California; A. F. Reed, Vice President, Lion Oil Company, El Dorado, Arkansas; John R. Riley, Jr., Vice President, Spencer Chemical Company, Kansas City, Mo.; F. T. Techter, Vice President, The Barrett Division, New York, New York; Frank W. Thomas, Jr., Ass't Sales Mgr., Mathieson Chemical Corp., Baltimore, Maryland; L. H. Wright, Vice President, Phillips Chemical Company, Bartlesville, Oklahoma.

St. Regis' New Plants

St. Regis Paper Company has just commenced construction of an addition to its multiwall bag plant at Pensacola, Florida. The expansion of the present bag plant comprises a two-story addition 360 feet by 144 feet and a one-story office section addition, 36 feet by 360 feet, to house bag division services. The new capacity is expected to be available for production late in 1952.

The company reports good progress in its construction of a new bag plant at Tacoma, Washington, which will replace the leased bag plant which the company is presently operating at Seattle.

Trying to Beat The Nitrogen Shortage!

Phillips 66

Phillips is producing nitrogen fertilizer materials at full capacity. But even our tremendous rate of production isn't always sufficient to meet today's demand. We'll do our best for you. Keep us in mind if you need nitrogen in any form.

AMMONIUM SULFATE—Phillips *66* Ammonium Sulfate is a free-flowing 21% nitrogen material! Mixes easily! Uniform crystals resist caking! Ideal for high-analysis mixed goods! A fine direct application material!

AMMONIUM NITRATE—Phillips *66* Prilled Ammonium Nitrate contains 33% nitrogen. The small, coated prills or pellets resist caking . . . handle easily. Phillips *66* Prilled Ammonium Nitrate can be depended on for uniform, free-flowing properties and top-notch crop response.

NITROGEN SOLUTIONS—More N per dollar! Phillips *66* Nitrogen Solutions are well suited to the preparation of high-analysis fertilizers and the ammoniation of superphosphate. These three nitrogen solutions keep handling costs low . . . promote rapid, thorough curing!

ANHYDROUS AMMONIA—Tank car shipments of Anhydrous Ammonia (82% nitrogen) go out to Phillips contract customers from Phillips production facilities in the Texas Panhandle. Write our nearest district office for full information.

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Officers

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Nominating Committee For 1952

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Members

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NFA CONVENTION PROGRAM

Current research and supply problems facing the fertilizer industry will be discussed at the 1951 Fall meeting of The National Fertilizer Association, to be held November 12, 13 and 14 at the Atlanta Biltmore Hotel, Atlanta, Ga.

Addresses will be delivered at the November 13 session by W. M. Myers, Director of Field Crops Research, U. S. Department of Agriculture, Beltsville, Md. on "Potentialities in Grasslands Improvement," and by H. R. Krueger, Director of Technical Service, Phillips Chemical Company, Bartlesville, Okla. on "Safety in Fertilizer Plants." Mr. Krueger is a member of the Advisory Committee of the National Safety Congress. J. E. Totman, chairman of the Association's Board of Directors, will also address the gathering.

The November 14 program will feature a forum on government controls and orders affecting the fertilizer industry. Participants will include: W. R. Allstetter, Deputy Director, Office of Materials & Facilities, Production & Marketing Administration, U. S. Department of Agriculture; Cedric Gran, Consultant, Agricultural Chemicals, Office of Price Stabilization; Kenneth H. Klipstein, Director, Chemical Division, National Production Authority; and Sheldon P. Wimpfen, Division of Raw Materials, Atomic Energy Commission.

A meeting of NFA's Board of Directors will be held November 12.

NFA Districts

(Continued from page 30)

Mississippi and Tennessee

District 9—The States of Louisiana, Arkansas, Oklahoma, Texas and New Mexico

District 10—The States of Wisconsin, Illinois, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas, Montana, Wyoming and Colorado

District 11—The States of Washington, Oregon and Idaho

District 12—The States of California, Arizona, Utah and Nevada

NFA NOTES

To help promote the National Grasslands Program, NFA is sponsoring, on a non-profit basis, the printing, of special four-color letterheads, designed to make our Nation's people conscious of the importance of grassland farming.

You can help in telling the story by using the letterheads in your own program. Your order would be welcomed by NFA.

* * *

NFA has published a brochure entitled "Fertilizer Use At The Half-Century Mark," which presents significant data which represents interpolations, on a 1950 basis, of statistics obtained in a comprehensive 1947 survey by the Bureau of Agricultural Economics, USDA.

The booklet will be of great value not only in assessing current use of fertilizer but also in forecasting potentialities in the future.

* * *

NFA's authoritative book on the peanut crop entitled The Peanut—The Unpredictable Legume has now come off the press. Fertilizer and seed dealers, growers and processors, vocational agriculture students in the peanut-growing areas, and others interested in the crop will find the volume indispensable in their work. The fully illustrated book is available from Association headquarters. Members' special price: $2.50 per copy postpaid. The book retails to the general public at $4 per copy.

Never bofore has the mass of available information been summarized and assembled within the covers of a single book. Need for such a volume has long been apparent. Although the peanut crop is most important in the agricultural economy of some 12 States, methods of most efficient production have long baffled scientists and farmers.

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If your product fits into a bag — we'll make the bag to fit your product.

ALLIED FARM CHEMICALS

(Continued from page 24)

to the entire heavily infested cotton area. In 1950 it is estimated that 3,900,000 bales and 1,600,00 tons of cottonseed were lost with gross dollar damage of more than $900,000,000. Preliminary estimates indicate that the 1951 crop will be one of the largest if not **the** largest in our history.

This high yield will be due in no small measure to the use of pesticides. For example, cotton growers are now treating crops even if no evidence of infestation is in sight, as compared to the old technique of application only after a 20 per cent infestation has been noted. The importance of pesticides as insurance can also be illustrated in another way—the farmer has a large investment in land, equipment, fertilizers, and seed, and for a few cents is able to insure his investment with the proper us of pesticides. In many instances banks and other large lending agencies specify pesticide treatment for crops on which money is loaned.

Approximately four years ago one-third of all cattle hides produced in the United States were damaged by grubs which meant an average loss of approximately 20 million dollars annually in this country alone. With the use of modern control measures this loss has been greatly reduced. Dipping of sheep stimulates animal growth giving higher yields of better quality wool.

Although damage to wool and wool products by insects has been estimated to be about one-quarter billion dollars per year, it is difficult to obtain reliable information. Needless to say, millions of dollars worth of clothing are saved thru the use of insecticides to control moths, carpet beetles, and other destructive pests.

Pesticides are an important factor in protecting animals as well as plants which supply the fibers for our clothes and again protecting them from other pests after they have been produced as finished goods.

Fourth, Pesticides and food

Everyone recognizes that the use of toxic materials for pest control may be hazardous and that steps must be taken to safeguard workers in manufacturing plants, users of pesticides, and consumers of food products.

The present ballyhoo and hullabaloo, however, has placed all the emphasis on **hazards of use** rather than the **great benefits derived from their proper use.** Moreover, pesticides are **chemical protectants** rather than **chemical additives.** As protectants and used during production or storage, pesticides are certainly not in the same category as chemical additives which may be used in processing or preservation of food.

Legislation alone cannot replace actual policing of the food supply to insure quality and purity. An expanded research program on the toxicology of new pesticides and methods of their analysis is recognized as necessary and desirable. Greater effort to educate the user on the proper application of pesticides must be pursued.

It is only fair that the public be given all the facts and not just statements prefaced by the word "may" which arouses the fear of the American public against the methods of use and application of pesticides in the protection and storage of our food.

Fruit and vegetable pests must be controlled by chemical protectants or the grower will go out of business and the consumer would suffer. Of the large quantities of pesticides used, only small amounts come in direct contact with the edible portion, i.e. potatoes, peas, beets and corn. On foods where insecticides are directly applied, the timing of treatment is such that only minimum residues remain at harvest which in most cases are removed after further processing. It should be pointed out that with one of the most widely used insecticides DDT, not one case of human death has been proved as due to exposure or from residues on foods.

In 1949, the value of crops saved from grasshoppers alone by insecticide control was placed at 72 million dollars—a saving of 55 dollars for each control dollar spent. Hundreds of other remarkable savings might be cited.

In 1950, over a million acres of small grain in Oklahoma, Texas, and Kansas became heavily infested with greenbugs. Up to that time there had been no known practical control for this serious pest. A new insecticide was successfully applied and saved many millions of bushels of needed small grains.

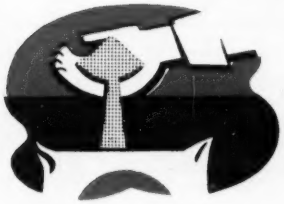
In this country, the many plant diseases that attack fruit, vegetable, cereal, and forage crops are estimated to cause losses amounting to 2 billion dollars each year. Many fruit and vegetable crops require the addition of fungicide dusts or sprays to prevent losses attributable to fungus or bacterial diseases. For example, in controlling late blight on potatoes and tomatoes, treatment is made to guarantee a marketable crop. Thus, routine application as a preventive must be made, regardless of whether the disease may be less prevalent than usual.

Plant growth regulators are receiving greater acceptance because of their value in controlling growth rates in the production of many fruits. This has resulted in the production of top quality products. Other uses of plant growth regulators are for improving storage qualities of both fruits and vegetables.

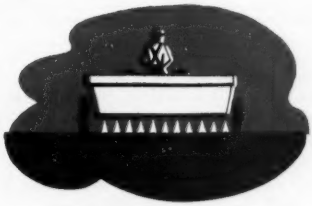
Many kinds of foodstuffs, including grain, cereals, flour, dried fruits, cured meats, and cheeses, are highly susceptible to infestation by insects and heavy loses are likely to occur unless adequate protection is given them. The infestation may start in the field during the growing period, in processing plants, during shipment or in storage.

High and low temperatures and sanitary measures in processing plants and storage are helpful in combating infestation but often do not eliminate or prevent it. Because of this inadequacy, fumigation has

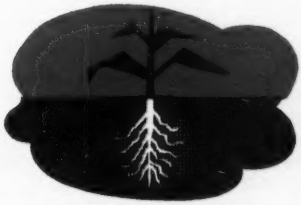
DAVISON GRANULATED Superphosphate 3 WAY CONTROL



STORAGE CONTROL—No caking or lumping while in storage.



APPLICATION CONTROL—No dusting or bridging; drills free and even.



FOOD CONTROL—Supplies plant food at a uniform rate.

Now it is possible for you to store superphosphate without fear of its caking . . . that is, if it is DAVCO GRANULATED SUPERPHOSPHATE. DAVCO Granulated Superphosphate will not become hard or caked . . . it is easier to apply in the field because there is no dusting or bridging over in the drill.

DAVCO Granulated Superphosphate gives complete coverage in the field . . . drilling freely and evenly . . . supplying each plant with a uniform quantity of nutrient phosphorus.

Get DAVCO Granulated Superphosphate . . . the superphosphate that gives you the added sales points through its 3-way control.

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long been depended upon to protect thousands of tons of diversified foodstuffs annually. Fumigation is also used to a limited extent to rid fresh fruits and vegetables of insect pests not yet widely distributed, thus preventing or retarding their spread.

In recent years outstanding results have been obtained in controlling weeds and undesirable woody shrubs and trees. This has made practicable the tremendous increase in grazing lands for greater production of livestock. Chemical control of weeds may be achieved at much lower costs than by cultivation and in wheat, rice, and many other field crops it is the only practicable method of weed repression. These developments have greatly reduced the amount of farm labor required at a time when manpower is an important factor.

Without going any further it can be concluded that billions of dollars and millions of tons of food and feed are saved each year through the proper use of pesticides. But, we must not overlook the fact that losses by various insect pests in the United States are still estimated to be four billion dollars annually . . . and that is a real challenge to **us.**

To meet this challenge the chemical industry alone will this year spend millions of dollars on research projects in the development of new pesticides. However, if unreasonable restrictions are placed upon the use of pesticides required for food production, it will necessarily stifle research and the development of new and improved materials. As responsible executives, you and I know that research must be directed into fields where there is some chance of bringing a product into commercial production within a reasonable length of time.

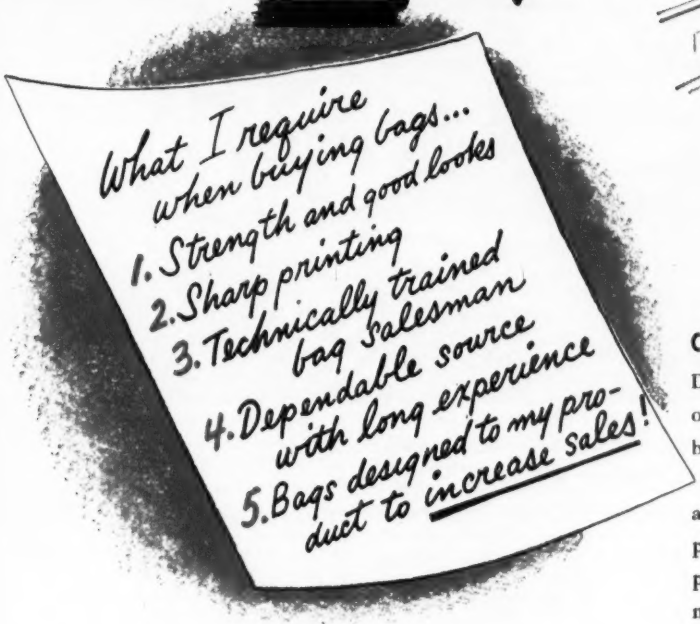
It is certainly unfortunate that there has been an attempt on the part of certain groups to impute a sinister meaning to the use of chemicals in protecting food, clothing, and the other necessities of life. Such groups fail entirely to recognize the honest competitive function which modern research plays in the development of new uses for chemicals.

The chemical industry today spends a vast sum for research. The total can hardly be approximated since not all companies report their reseach expenditures. We do know, however, that the leading companies in the strictly chemical field spend an average of about 3 per cent of their total sales dollar and the pharmaceuticals will run as high as 7 to 10 per cent. The total sum certainly runs in many, many millions of dollars. As an example, my own company — Commercial Solvents—is spending better than 2 million dollars a year on research. Research expenditures of other companies in the industry range from well below this figure to the 38 million dollars spent by DuPont in 1950.

A substantial percentage of such large sums is spent for research in agricultural chemicals, including

One way to buy bags...

and the right way


What I require when buying bags...
1. Strength and good looks
2. Sharp printing
3. Technically trained bag salesman
4. Dependable source with long experience
5. Bags designed to my product to increase sales!

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Choose Chase for all 5 features

Drawing names out of a hat may be one way to make a decision. But in buying bags we feel sure that you'll want to choose the container that assures the best protection for your product, the best acceptance of your product. Call in your Chase Salesman. He's technically trained to analyze your needs . . . he's supported by more than 100 years of experience in providing better bags for American industry and agriculture.

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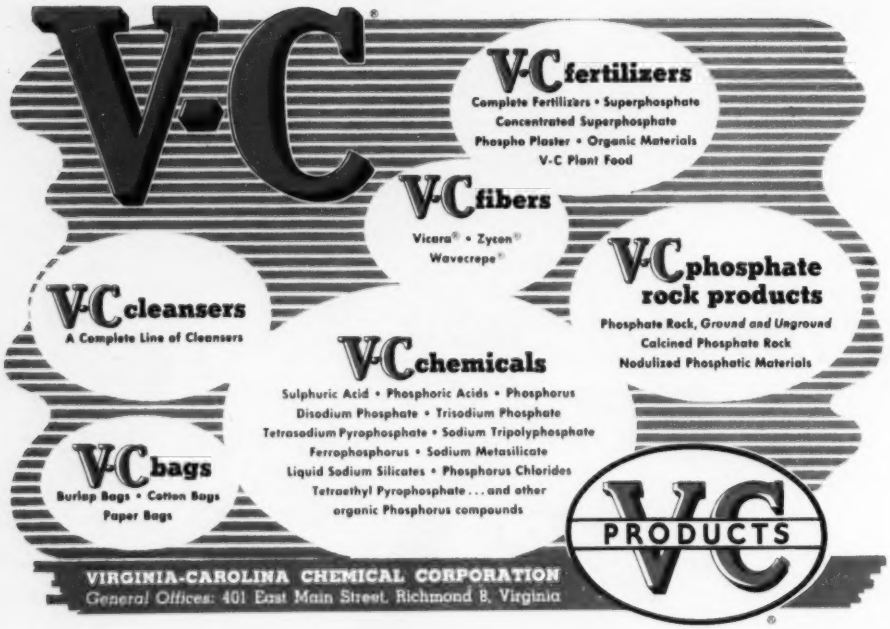


pesticides for application in the food growing, and food processing branches of the business. In addition, governmental and educational sources contribute many millions more to research efforts in these fields.

Could anyone think that these vast amounts are being used to develop products which will fool the public and injure the ultimate consumer?

Far from this, the chemical industry is actually aware of its responsibility as a guardian of the public health. I referred before to the "honest campetitive function" which research plays, and it is worth while to elaborate a little on this point.

New products are developed by private enterprise for profit, and in the world of free enterprise this is the fundamental reason for the tremendous research and development expenditures which I have mentioned.

But if any chemical concern attempted to put out a product which was detrimental to the public health, its competitors would quickly and happily make that fact known. Free enterprise and the profit motive, in fact, act as powerful influences against the reckless introduction of new products.

Today we have vastly improved weapons at our command and we are upon the threshold of still greater advances in insecticidal technology. To relax our research and development or to be hampered by more restrictive regulations and controls will halt the progress we are making.

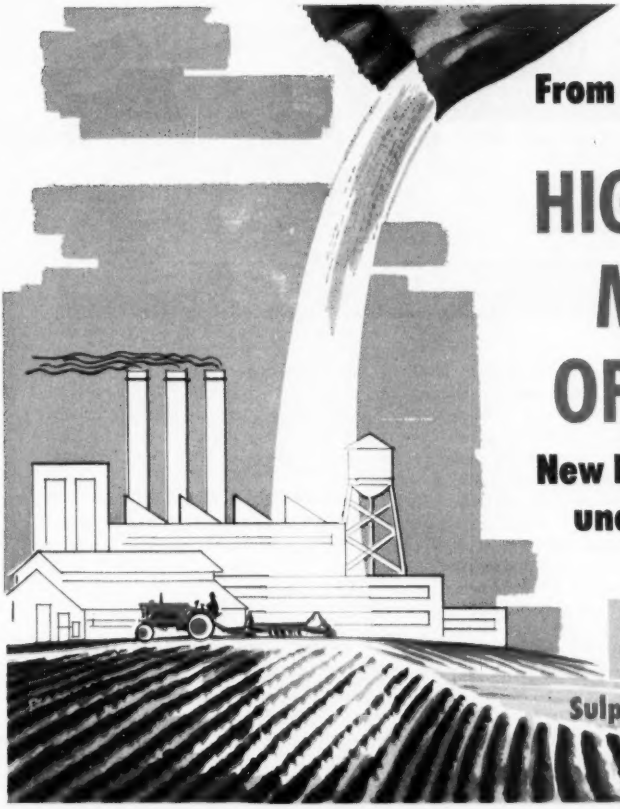
In closing I wish to spend a few minutes on another subject which is definitely Your Business — and Mine. I refer to this country of ours.

What I am about to say is not said in any spirit of partisanship—rather it comes from a troubled and concerned mind. However, I make no apology for what I am now going to say.

Today we are engaged in mortal combat with two great enemies—Communism and Inflation. Both work from without and from within. Their purpose is sinister and insidious. Their aim is destruction. We must fight them both. Unfortunately, in fighting Communism we play right into the hands of our other enemy—inflation.

When we entered World War I, our national debt was one billion dollars. At the start of World War II it was 60 billion. It stands today at over 260 billion. Our leaders talk of a national budget in excess of 70 billion and yet seem most unsympathetic toward any suggestions of reducing nonessential expenditures. There are some 2-¼ million people on the federal payrolls, exclusive of military personnel. I recently heard the great Virginia statesman, Senator Harry F. Byrd, say that over 2200 new employees were being added daily.

Ladies and Gentlemen, this country can be controlled to death, tax-



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ed to the point of diminshing return and spent to utter destruction.

Of course, we should build our defense so strongly that we fear no other power. Certainly we should give economic aid to our friends and allies—but extravagance and waste should be eliminated and the dissipation of our money and our resources, either at home or abroad should be stopped forthwith.

Above all else our respect and faith in the morality and honesty of public officials should somehow be restored.

It seems that we move from one emergency to another and from crisis to crisis. The world looks to this country for leadership but unless we can stop confusion in our own government and put our own house in order, such leadership cannot be given—Insidious inflation and unrealistic fiscal policies threaten a paralysis of a system we call free enterprise.

There are those in this country today, who seek to destroy our freedom of action and our system of free enterprise. Let us never forget that these false leaders aim to destroy the very system that has provided the highest wages and the highest standard of living ever known in any country in all the history of the world. Though some in high places have not set a very good example, we should turn our backs on such people and such philosophies.

By any standards of comparison this land of ours, which is so much Your Business—and Mine has been and will always remain the best place in all the world in which to live. It is worth saving! And how can that be done?

Well, listen, please, to some words spoken over 90 years ago by the immortal Lincoln. Enroute to Washington for the first inaugural, he paused in Indianapolis and there made a little known and seldom quoted speech. Hear his words:

"In all the trying positions in which I shall be placed, and doubtless, I shall be placed in many such, my reliance shall be upon you and the people of the United States. I wish you to remember, now and forever, that it is **your** business, and not mine, that if the union of these states and the liberties of this people shall be lost, it is but little to any one man 52 years of age; it is a great deal to the 30 millions of people who inhabit the United States and to their posterity in all coming times. It is your business to rise up and preserve the union and liberty for yourselves and not for me. I appeal to you again to constantly bear in mind that not with politicians, not with presidents, not with office seekers, but with YOU is the question, — shall the union and shall the liberties of this country be preserved to the latest generations."

That is Your Business—and Mine.

USDA reports on three new compounds, screened in herbicidal evaluation research at Beltsville this Summer, which hold promise as pre-emergency sprays for the control of annual grasses, certain broadleaf weeds in cotton and other crops. The report is issued by Dr. Warren Shaw and Charles Swanson.

Twenty compounds were evaluated, of which the most promising—of those not yet commercially available—are these:

3 chloro isopropyl-N-phenyl carbamate killed weeds in cotton, peanuts and soybeans with little or no crop injury.

3 (p-chlorophenyl) 1-1-dimethylurea gave good control of annual grasses and broad leaf weeds in cotton, peanuts, soybeans, squash, watermelon, and lima beans when used as a pre-emergence spray and low rates. At only slightly higher rates the compound killed the crop as well as the weeds. Caution is indicated in its use, and in instructions to users.

Dichloral urea which looks promising for weed control in cotton, sugarbeets, cantaloupe, watermelon, rape, snapbeans, squash and cucumbers.

USDA will give these compounds additional tests on other crops in other parts of the country.

* * *

Speaking at a recent meeting of the Florida Entomological Society, **Dr. E. F. Knipling** is quoted as saying "Insects do have the ability to develop the resistance to insecticides. They are even becoming hardened to substitutes."

* * *

Electrified insecticide dust will cling to plants from five to ten

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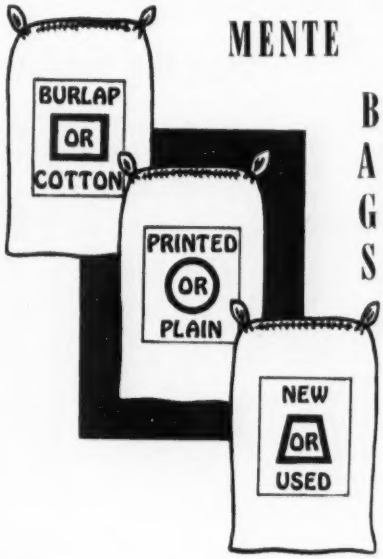

Bag users in many different fields have developed a high regard for **MENTE BAGS** because of their dependable qualities. In the fertilizer field **MENTE BAGS** have proved their value and popularity many times over.

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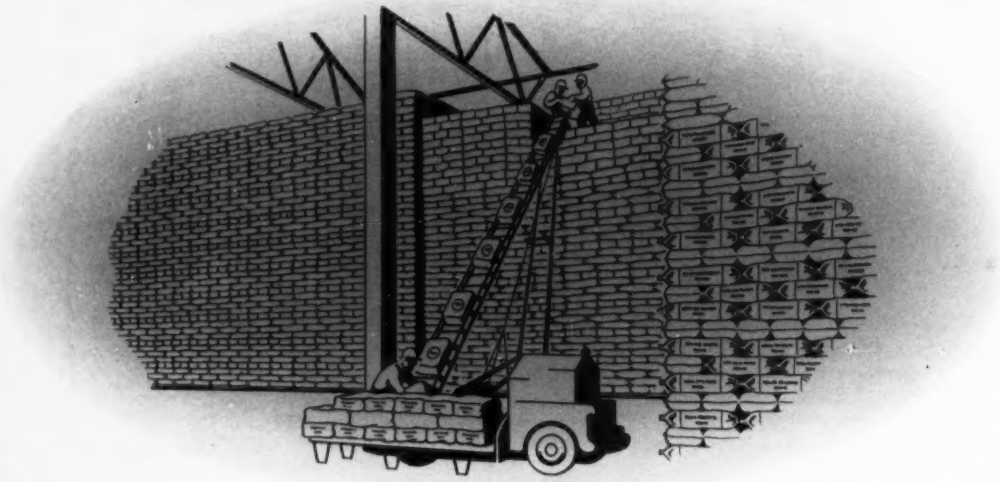

Yes, a great deal more goes into Hammond Multi-Wall Bags than the hundreds of products that are now safely and dependably shipped in them. Here are a few reasons for Hammond's steady growth and for the steadily increasing demand for these Better Bags:

1. Only papers and materials of highest quality are used in the production of Hammond Multi-Walls.

2. Hammond's two large plants are devoted almost exclusively to Multi-Wall Bag production, placing at your service a highly specialized organization for your shipping bag needs.

3. Pride of workmanship and a thorough knowledge of your shipping problems assure you of utmost care of your Multi-Walls through every phase of production.

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times better, according to **A. W. Farrall,** head of the Michigan State agricultural engineering department. High electrical charges are applied as the dust leaves the nozzel. The plant develops the opposite charge and attracts the particles, even on the underside of leaves. Though the voltage is high—up to 20,000—the wattage is low and the appartus used is safer than an approved electric fence.

* * *

Tobacco By-products and Chemical Corporation, V-C subsidiary, is building a new plant at Waco, Texas for the production of insecticides especially those for the cotton, vegetable and fruit crops of the Southwest.

* * *

California Spray-Chemical Corp. has opened its plant at Decatur, Alabama. They are producers of insecticides, fungicides and herbicides.

* * *

Agricultural Chemicals, Inc., Llano, Texas, insecticide producers, who have bought the land and buildings of the Booster No. 2 line of the Jacksonville, Arkansas, Ordnance plant, but have not yet announced their plans for the plant.

* * *

The stockholders of **Diamond Alkali** have authorized the purchase of **Kolker Chemical Works** as outlined in our pages last month.

* * *

Pennsylvania Salt has opened a district office in Atlanta, Georgia at 1207 Atlanta Federal Savings Building, with J. Howard Morrison as district sales manager. Sales of bulk agricultural chemicals will continue to be handled from Montgomery, where Pennsalt earlier this year opened a plant where a variety of farm chemicals are blended and packaged.

* * *

George F. Leonard, executive vice-president of **Tobacco By-Products** was elected to the Board of NAC at their recent convention.

* * *

Gerald D. Baerman has been named director of all insecticide activities of **Naco Fertilizer Co.,** who have five insecticide plants.

NFA REPORT

(Continued from page 19)

of it will require 18 to 24 months. The critical steel situation is delaying the construction of these new N plants and will make the building of them difficult and delayed.

C. Superphosphate

1. Although the production of this material for the first half of 1951 was slightly more than in 1950, the increase was undoubtedly at the expense of stock piles and inventories of sulfur and sulfuric acid. All information shows less supplies of sulfur and sulfuric acid.

2. Although increased production of triple superphosphate will occur in some plants, the production at TVA will be less, and triple super will continue to be short. In any case, the availability of phosphoric acid for 1951-52 whether from triple super or from normal super will be in direct proportion to the supply of sulfur and sulfuric acid.

3. It is anticipated at present that available phosphoric acid will be from 10 to 15 percent below that produced in the 1950-51 season.

D. Potash

1. Estimates for the 1951-52 season are 1,600,000 tons, an increase of about 13 percent over that used in agriculture for the 1950-51 season. This anticipated increase of potash allows for both domestic production and expected imports.

2. Although two new companies are constructing potash producing facilities in New Mexico, it is doubtful if they will be operating in time to provide much production in 1951-52. In all, the potash supply will be good as related to last year but will continue to be below the needs.

Experimental Run At Hattiesburg Plant

In a test run at the Meridian Fertilizer factory plant in Hattiesburg, Miss., Chemical Construction Corporation showed that triple superphosphate fertilizer can be produced in present Broadfield process equipment. Although not a new process, triple superphosphate is not normally produced in this equipment; however, the experiment's success has added a new technique to the equipment's use.

SURVEY

(Continued from page 22)

only one pound of nitrogen and less than a pound of phosphoric oxide. Present plantings of corn—on more than a million acres—currently re-

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Superphosphate — Sulphuric Acid — Complete Fertilizers
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ceive an average of three pounds of nitrogen and four pounds of phosphoric oxide. Pasture and cover crops on 3½ million acres average five pounds of nitrogen, and eight pounds of phosphoric oxide per acre. The scientists estimate that an eight-fold increase in nitrogen would boost pasture yields by 21 percent.

Similar reports have been issued for the South, the Midwest, and the Northeast and one for the United States as a whole is being compiled from the regional surveys. The reports are available to workers in State and Federal agencies concerned with fertilizer problems and to members of the fertilizer industry.

Bemis' Wins Safety Award

The St. Louis bag manufacturing plant of the Bemis Bro. Bag Co. recently was awarded first prize in the Interplant Safety Contest sponsored by the Safety Council of Greater St. Louis.

The prize was in recognition of maintaining the lowest number of employee accidents per million man hours worked. The Bemis Plant had an average yearly employment of 552 persons who worked approximately one million man hours. The accident frequency rate for this period was 4.00, while that of the entire 83 participating plants, working 100 million man hours was 13.27.

W. J. Bosche, Assistant Superintendent of Bemis' St. Louis plant received the award in behalf of the company at a banquet sponsored by the Safety Council.

MARKETS

ORGANICS: Rather little activity is noted in the market on Fertilizer Organics as the producers of Domestic Nitrogenous Tankage are sold up for the fall and into the spring. Domestic Nitrogenous prices nominally range from $4.25 to $4.90 per unit of Ammonia, bulk, f.o.b. production points. Light offerings of Imported Nitrogenous are from $6.00 to $6.25 per unit of Ammonia, in bags, CIF Atlantic ports. South American Fertilizer Organics continue too high in price to interest American manufacturers.

CASTOR POMACE: Very limited quantity for September shipment is available at $37.25 per ton in burlap bags, f.o.b. Northeastern production points. This material is guaranteed minimum 6.75% Ammonia. Imported Castor Pomace varies in price from $45.00 to $48.00 per ton, in bags, CIF Atlantic Ports.

DRIED BLOOD: Unground Dried Blood, in bulk, is at around $8.25 per unit of Ammonia, f.o.b. Chicago. New York market is around $6.75 to $7.00.

POTASH: As the fall season opens, demand for Potash increases with the movement steady from Domestic sources. Considerable quantities of Imported Muriate of Potash have been booked for fall shipment from Europe.

GROUND COTTON BUR ASH: This excellent source of Potash primarily in the form of Carbonate of Potash, is available in sizeable quantities for prompt and spread shipment during the season. The most reliable shippers have been furnishing material testing rather consistently about 40% K_2O.

PHOSPHATE ROCK: As the season progresses supply conditions tend to grow tighter. Limiting factor in the movement continues to be the available supply of Sulphuric Acid but movement of rock is heavy.

SUPERPHOSPHATE: No change in the supply situation seems to be apparent and demand continues heavy. Prices are at ceiling levels.

SULPHATE OF AMMONIA: This market is firm with shipment keeping pace with production. No changes in prices have been noted.

AMMONIUM NITRATE: Demand is far in excess of supply and the market is tight. Prices remain unchanged. One western producer, who formally allowed freight equalization, has discontinued equalizing freights and all prices are f.o.b. shipping point.

NITRATE OF SODA: Market is firm with shipments at seasonal dimensions. No change in price has been noted.

GENERAL: As small Fertilizer mixers are now beginning to make preparation for producing Fertilizers, demand for the three major ingredients, Nitrogen, Superphosphate and Potash is increasing sharply. Superphosphate continues to be the yardstick, governing the amount of mixed fertilizer that will be sold.

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EXPORT ORDERS SOLICITED

FERTILIZER TAX TAG SALES AND REPORTED SHIPMENTS[1]
(In Equivalent Short Tons)
Compiled by The National Fertilizer Association

STATE	August		January-July	
	1951	1950	1951	1950
N. Carolina	1/	1/	1,458,089	1,433,033
S. Carolina	21,614	26,500	687,252	713,335
Georgia	9,734	20,105	1,029,316	963,471
Florida	37,175	34,990	708,255	617,445
Alabama	17,634	13,933	898,306	856,580
Tennessee	9,384	9,478	423,143	387,762
Arkansas	7,281	9,694	360,452	303,571
Louisiana	9,247	8,179	243,451	209,127
Texas	14,575	23,808	358,886	346,681
Oklahoma	1/	1/	91,973	92,132
TOTAL SOUTH	126,644	146,687	6,259,123	5,923,137
Indiana	86,055	71,355	526,295	567,064
Kentucky	39,459	45,751	360,886	417,373
Missouri	58,006	41,826	479,668	298,533
TOTAL MIDWEST	183,520	158,932	1,366,849	1,282,970
GRAND TOTAL	310,164	305,619	7,625,972	7,206,107

1/ Oklahoma and North Carolina report tax tag sales 30 days after the end of the current month. Oklahoma and North Carolina tag sales for July, 1951 represent 3,405 and 10,874 tons respectively, compared to 3,820 and 8,239 tons during July, 1950. Virginia reports quarterly.

U. S. SUPERPHOSPHATE SUMMARIES, in Thousands of Short Tons
Based on Data for 205 Plants, Representing Total U. S. Production
Compiled from Reports Submitted to The National Fertilizer Association
and a Summary of Reports Submitted to the Bureau of the Census

	July, 1951			Total, 18% APA Basis				Conc. (45% APA)	
	Normal 18% APA Basis	Wet Base 18% APA Basis	Conc. 45% APA Basis	July		Jan-July		Jan.-July	
				1951	1950	1951	1950	1951	1950
Stocks, first of period	930	5.3	63	1,093	1,178	1,207	1,421	55	104
Production	665	4.6	60	819	717	6,837	6,328	427	394
Received from other plants	7	—	—	7	1	85	48	—	—
Book adjustments	1	—	—	1	2	27	57	—	—5
Total Supply	1,603	9.9	123	1,920	1,898	8,156	7,854	482	493
Shipments	265	2.5	56	409	344	3,993	3,900	410	408
Used in reporting plants	281	.6	1	282	259	2,915	2,657	6	10
Total disposit'n	546	3.1	57	691	603	6,908	6,557	416	418
Stocks, end of period	1,057	6.8	66	1,229	1,295	1,248	1,297	66	75

Sales of fertilizer tax tags in the 13 reporting states during the first seven months of this year were about six percent higher than during the same period of 1950, according to The National Fertilizer Association. Tag sales during the past few years have been about 55 percent of the total U. S. fertilizer consumption.

Tax tags representing the equivalent of 6.3 million tons of fertilizer were sold in the 10 reporting Southern States from January 1, 1951, through July 31, 1951, compared to 5.9 million tons during the like period of 1950. Midwestern sales were 1.4 million tons against 1.3 million tons during the same seven month periods.

OBITUARIES

Don N. Dunford, sales manager and a member of the controlling family of Inland Fertilizer Co., Los Angeles. Died suddenly of a heart attack September 26.

Max Feinstein, president Star Fish & Bone Fertilizer Co., Bridgeton, New Jersey, September 3.

William X. Hull, 66, foreign liaison officer for the USDA soil conservation service, died September 8 of a heart attack while visiting a neighbor at his Washington home.

Dr. Theodor Roemer, 67, German botanist best known for his development of disease-resistant grains. He died in Berlin.

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1090 Jefferson St., N. W. Atlanta, Georgia

NO—RAIN DOES NOT SUPPLY ENOUGH SULPHUR, LONG SAYS

In August we ran some quotations on sulphur. Reading that the University of Tennessee was quoted as saying rainfall brought down enough sulphur so that there was no need for extra amounts of sulphur in fertilizers, we sent the quote to NFA—and that led to considerable correspondence, which we published.

Now comes O. H. Long, of the Tennessee AES, who writes as follows, clearing up the whole situation.

"Your article on sulfur in the August 1951 issue of Commercial Fertilizer has been called to my attention. I am particularly interested in this article since one of your correspondents (name not given) has quoted me on the value of sulfur in fertilizers. This correspondent also quotes me with respect to fused tricalcium phosphate and concentrated superphosphate as sources of fertilizer phosphorus.

"In order to get the record straight, I am sending you under separate cover two recent publications of the Tennessee Agricultural Experiment Station that bear on these two points. One publication—Bulletin 220, Fertilizer Experiments with Cotton—has a brief discussion on the value of sulfur in certain experiments with cotton. We neither said nor implied that rainfall brought down a sufficient supply of sulfur in all cases. In fact, we raised the question as to how long the present soil supply would last if no sulphur were added in fertilizers. In this connection, we are at present conducting experiments in sparsely-settled locations in Tennessee in order to further study this question. You will find the entire discussion on sulfur in three paragraphs on page 18 of this publication.

"The other publication—Circular 107, Fused Tricalcium Phosphate—discusses the results of several years work with this phosphate on a variety of farm crops. We pointed out the importance of fineness in this material and its somewhat slow action on soils low in available phosphate. We further recommended that it be used on permanent pastures or in rotations with legumes and not on row-crops or non-legumes.

"We will be glad to send copies of these two publications to any one requesting them.

"Very truly yours,
O. H. Long
Associate Agronomist"

John J. Harte Company Opens Houston Office

The John J. Harte Company, Atlanta engineering and construction firm, has opened a new office in Houston, Texas, it was announced by John J. Harte, president of the firm, by the expanding activity of industry to the south and southwest. The Harte Company also

maintains offices in Atlanta, Georgia, and in New York City.

Arthur Allen, of Houston, will manage the new office, and will cover the Gulf Coast Area, the Southwest and Mexico, as contracting engineer for the Harte organization.

Chase Issues 16 Page Booklet

A new booklet titled "Worth Looking Into" is being distributed by Chase Bag Company. Through its 16 pages, the booklet describes the company's purchasing policies; laboratory, research, engineering and manufacturing facilities; and illustrates the complete line of textile, paper and film containers and packaging materials made by the 104 year old firm.

Copies may be obtained by writing to Chase Bag Company, General Sales Office, 309 W. Jackson Blvd., Chicago 6, Ill.

Bamag-Meguin Has Improved Nitric Process

Bamag-Meguin announces its improved Fauser process for direct manufacture of nitric acid by oxidation of ammonia with pure oxygen. Either 60 percent acid is thus obtained for further conversion into sodium nitrate, ammonium nitrate, calcium ammonium nitre and ammonium sulphate or 98 percent concentration of nitric acid can be obtained without the use of sulphuric acid. The use of pure oxygen instead of atmospheric air in the conversion of ammonia and in oxidation of nitric oxide and dioxide results in considerable reduction of the size of the plant and reduces its purchase price. The cost of operation of the plant is also lower than with ordinary plants. The process is especially suitable where cheap oxygen is available.

The process and equipment are available through the manufacturer's exclusive agents, General Industrial Development Corporation, 270 Park Avenue, New York 17, New York.

Electric Furnace Co. Has New Cleaner

For quick steam cleaning of fertilizer plant equipment, such as payloaders, scales, conveyors, electric motors and the like, Electric Furnace Corporation, Chattanooga, Tennessee, have developed an inexpensive, portable, high-pressure electric steam cleaner, known as Electroking. Developed after actual test operation in a number of fertilizer plants, Electroking is completely automatic, and especially adapted for use in this industry.

The device is supplied with a time switch which turns on the current in early morning. By the time the work day begins, steam has reached 145 pounds pressure, and the equipment is ready to operate. It will run wide open for four continuous hours at full pressure.

Electroking is made for single or 3-phase, 220, 440 or 550 volt operation, 20 KW. The company also supplies completely automatic electric bath water installations for mines, plants and other points where mass bathing is an essential part of operation.

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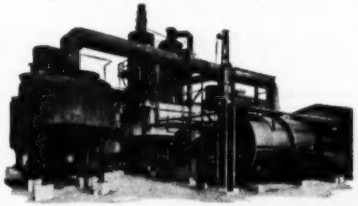

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Substitutes For Elemental Sulphur

The United States has much to learn from Europe in the development of substitutes for elemental sulphur and in making available sulphur supplies stretch as far as possible, Dr. C. E. Waring, vice-president for research of The Davison Chemical Corporation, told members of the Pennsylvania Chapter of the American Institute of Chemists at a dinner October 4 in the Engineers' Club, Philadelphia. He was reporting his observations on a recent trip to European chemical manufacturing centers.

The sulphur shortage is of comparatively recent origin here, Dr. Waring pointed out, but has existed for many years overseas. This has led to the greater development, by the countries of Europe, of methods of dealing with the shortage. He cited France particularly as having shown ingenuity in this direction, stimulated by the blockade during the last war when pyrites, a source of sulphur, could not be imported.

Processes which have contributed the most either to the output of sulphuric acid or the saving of the acid, Dr. Waring said, were the production of the acid using gypsum as a raw material and producing cement clinker as a co-product; use of a mixture of approximately 50 per cent sulphuric acid and 50 per cent nitric acid for acidulation of phosphate rock to produce nitrophosphates; use of gypsum with ammonia and carbon dioxide to produce ammonium sulphate without the use of sulphuric acid.

Commercial Solvents Receives Award

In the final ratings of the independent board of judges in the Financial World Survey of Annual Reports, Commercial Solvents Corporation was judged as having the best annual report of the chemical industry. The bronze "Oscar of Industry" trophy will be presented to J. Albert Woods, president of the company, at the Annual Awards Banquet in the Grand Ballroom of the Hotel Statler, New York, on October 29, 1951.

A total of 5,000 annual reports were considered this year in the international competition, the eleventh in the series of surveys, and these were judged in one hundred industrial classifications for the "Best of Industry" awards. In the chemical industry category, Monsanto Chemical Co. was runner-up for top honors, while Hooker Electrochemical Co. placed third.

Weston Smith, executive vice president and originator of the annual report surveys, will present the "Oscar of Industry" trophies at the annual awards banquet, which will be attended by more than 1,300 business and financial executives from all over the United States and Canada.

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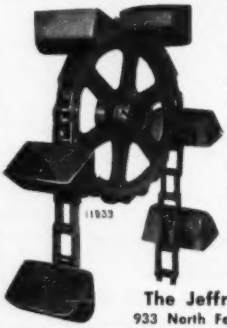

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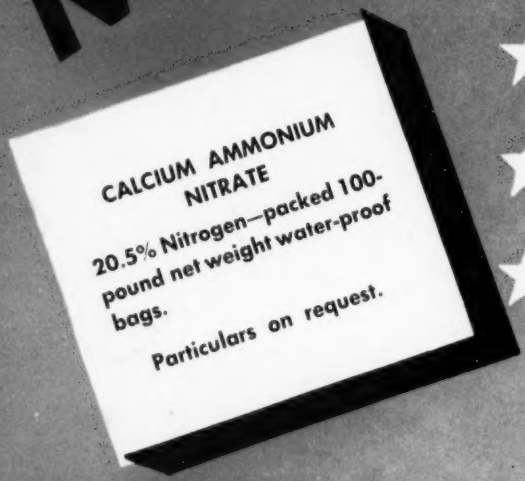

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